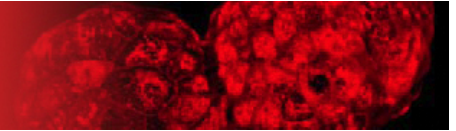


Reproduction, Fertility and Development



Vertebrate Reproductive Science & Technology

Search

Journal Home

About the Journal
Editorial Board
Contacts

Content

Online Early
Current Issue
Just Accepted
All Issues
Special Issues
Research Fronts
Sample Issue

For Authors

General Information
Instructions to Authors
Submit Article
Open Access

For Referees

Referee Guidelines
Review Article

For Subscribers

Subscription Prices
Customer Service
Print Publication Dates

e-Alerts

Subscribe to our email [Early Alert](#) or [RSS](#) feeds for the latest journal papers.

Connect with us



Affiliated Societies

RFD is the official journal of the [International Embryo Transfer Society](#) and the [Society for Reproductive Biology](#).

Article

[<< Previous](#) | [Next >>](#)
[Contents Vol 25\(1\)](#)

317 EFFECT OF TIME OF ONSET OF FOLLICLE-STIMULATING HORMONE TREATMENT ON SUPEROVULATORY RESPONSE AND EMBRYO YIELD OF SANTA INES EWES DURING BREEDING SEASON

M. E. F. Oliveira^A, C. C. D'Amato^A, C. S. Oliveira^A, F. F. P. C. Barros^A, A. P. Perini^A, M. R. Lima^A, P. P. M. Teixeira^A, M. A. R. Feliciano^A, L. G. Oliveira^A, S. D. Bicudo^B, J. F. Fonseca^C and W. R. R. Vicente^A

^A Sao Paulo State University (FCAV/UNESP), Jaboticabal, SP, Brazil;

^B Sao Paulo State University (FMVZ/UNESP), Botucatu, SP, Brazil;

^C Brazilian Agricultural Research Corporation (EMBRAPA/CNPC), Sobral, CE, Brazil

Reproduction, Fertility and Development 25(1) 306-306 <http://dx.doi.org/10.1071/RDv25n1Ab317>

Published: 4 December 2012

Abstract

This study was designed to investigate if the time of onset of FSH treatment [near the emergence of first or last follicular wave on progesterone (P4) protocol] influenced the superovulatory response and embryo yield in Santa Ines ewes during breeding season. Days of emergence of the follicular waves were defined in a previous study that evaluated the follicular dynamic in oestrus synchronization treatments (Oliveira *et al.* 2011 *Acta Sci. Vet.* **40**). We observed emergence of the first and last follicular wave on 5.69 ± 0.42 and 11.25 ± 0.39 days of protocol, respectively. Twenty Santa Ines ewes were submitted to 2 superovulatory protocols according to the time that FSH treatments were initiated (G-first wave, $n = 10$; G-last wave, $n = 10$). On Day 0, all ewes received a P4 device (CIDR[®]; Pfizer Animal Health, New York, NY, USA) and injection of $37.5 \mu\text{g}$ of *o*-cloprostenol, IM. The FSH treatments started on Day 6 and Day 11 of protocol for G-first and G-last, respectively. The superovulatory regimen consisted of 8 IM injections of pFSH administrated twice daily (40, 40, 30, 30, 20, 20, 10, and 10 mg of pFSH). The P4 device was removed on Day 8 and Day 13 for G-first and G-last, respectively. At these times, all ewes received another injection of $37.5 \mu\text{g}$ of *o*-cloprostenol and a dose of 200 IU of eCG. During 4 days after the P4 device removal, ewes were mated by a fertile ram. Embryo collections were accomplished 7 days after CIDR withdrawal. The ovaries were evaluated by ultrasonography (3 times daily, during the mating period) and laparotomy (concomitantly with embryo collection). The superovulatory response was observed by classified by score: 0 = 4 or fewer corpora lutea (CL); 1 = between 5 and 10 CL; and 2 = 11 or more CL. Data were analysed by GLIMMIX using SAS software (SAS Institute Inc., Cary, NC, USA). All donors from G-first had superovulatory response classified as score 2, whereas 60% of ewes from G-last were classified as score 2, 20% as score 1, and 20% as score 0 ($P < 0.05$). There were effects between treatments ($P < 0.05$) for ovulation rate (G-first: $97.9 \pm 1.4\%$ v. G-last: $88.5 \pm 4.4\%$) and number of ovulations (G-first: 17.0 ± 2.3 v. G-last: 12.5 ± 2.6). The numbers of luteinized unovulated follicles were 0.7 ± 0.5 for G-first and 1.2 ± 0.4 for G-last ($P > 0.05$). There was no difference between G-first and G-last ($P > 0.05$) in the rate of ova/embryos recovered ($54.9 \pm 5.7\%$ v. $49.3 \pm 8.5\%$), mean number of ova/embryos recovered (9.0 ± 1.4 v. 6.3 ± 1.1), number of viable embryos (3.8 ± 1.5 v. 3.4 ± 0.8), or viability rate (40.3 ± 10.8 v. 53.4 ± 12.1). In conclusion, the FSH treatment started near the emergence of the first follicular wave of progesterone protocol in Santa Ines ewes during the breeding season resulted in a higher superovulatory response than that started near the last follicular wave; however, no improvements in embryo yield were observed.

Financial support: FAPESP.

[HTML](#) Abstract
[Export Citation](#)
[Print](#)
[ShareThis](#)

[Legal & Privacy](#) | [Contact Us](#) | [Help](#)



© CSIRO 1996-2013