



216 DINOPROST ADMINISTRATION, PERIOD OF OVULATION, AND OVULATORY FOLLICULAR SIZE ON DAYS FOUR TO SIX OF ESTROUS CYCLE IN EWES

P. M. P. Nascimento^A, A. P. Oliveira^B, F. Z. Brandao^A, A. L. R. S. Maia^A, P. H. N. Pinto^C, M. E. F. Oliveira^D, J. H. Bruschi^E, J. H. M. Viana^E and J. F. Fonseca^F

^A UFF, Niteroi, Rio de Janeiro, Brazil;

^B EPAMIG, Belo Horizonte, Minas Gerais, Brazil;

^C UFPR, Curitiba, Parana, Brazil;

^D UNESP, Jaboticabal, São Paulo, Brazil;

^E Embrapa Gado de Leite, Juiz de Fora, Minas Gerais, Brazil;

^F Embrapa Caprinos e Ovinos, Ceará, Brazil

Abstract

The aim of this study was to evaluate the effects of 2 doses of dinoprost at the time of ovulation on Days 4 to 6 of the estrous cycle in ewes. The experiment was conducted in the city of Piau (Minas Gerais, Brazil) from July to August 2008 during the local non-breeding season. Twenty-four ewes with body condition score 3.0 ± 0.75 were used for this experiment. The estrous cycle was synchronized with intravaginal releasing devices containing 0.33 g of progesterone for 6 days (Eazi-Breed CIDR[®], Pfizer Animal Health, São Paulo, Brazil), and 12.5 mg of dinoprost (Lutalyse[®], Pfizer do Brasil Saúde Animal, São Paulo, Brazil) laterovulvar plus 10 IU of eCG 24 h before device removal. Animals were monitored by transrectal ultrasonography every 8 h and subjected to 5 or 10 mg of dinoprost on Days 4, 5, or 6 of the cycle. Results were submitted to ANOVA and Tukey test, using all tests at the 95% confidence interval (SAEG program, Funarbe, Viçosa, Brazil). Data were reported as percentage or mean \pm SD. The period from device removal to ovulation was 48.0 ± 7.07 h. The 5-mg dinoprost dose evoked similar ($P > 0.05$) results for Days 4, 5, and 6 regarding the time of ovulation after luteal gland regression induction [71.3 ± 28.6 , 71.46 ± 30.4 , and 68.2 ± 29.2 h for Days 4 ($n = 4$), 5 ($n = 4$), or 6 ($n = 4$), respectively] and follicle size (6.48 ± 0.34 , 6.41 ± 0.35 , and 6.5 ± 0.32 mm for Days 4, 5, and 6, respectively) at the time of ovulation. In animals that received 10 mg of dinoprost, the time of ovulation was affected ($P \leq 0.05$) by Day of treatment [71.3 ± 27.6 , 68.3 ± 30.6 , and 64 ± 29.2 h for Days 4 ($n = 4$), 5 ($n = 4$), and 6 ($n = 4$), respectively]. However, there was no effect of the 10 mg on follicle size at ovulation (6.48 ± 0.34 , 6.41 ± 0.35 , and 6.3 ± 0.33 mm for Days 4, 5, and 6, respectively). There was no difference ($P \geq 0.05$) on the size of ovulatory follicle(s) among animals with 1 ($n = 4$, 4, and 1 for Days 4, 5, and 6, respectively), 2 ($n = 3$, 3, and 4 for Days 4, 5, and 6, respectively), and 3 ($n = 1$, 1, and 3 for Days 4, 5, and 6, respectively) ovulations. The difference in the interval from luteal gland regression to ovulation in animals that received 10 mg of dinoprost on Day 6 of the estrous cycle suggests a higher sensitivity of corpora lutea at that moment. Results showed that both doses of dinoprost were capable of inducing early luteal gland regression; this fact supports the use of short-term protocols for the induction of estrus in ewes.

Pfizer Brazil, CNPq, FAPEMIG.

Reproduction, Fertility and Development 22(1) 266–266 doi:10.1071/RDV22n1Ab216
Published: 08 December 2009

Top Print Email this page

Legal & Privacy | Sitemap | Contact Us | Help



© CSIRO 1996–2010

View

- ▶ Issue Contents
- ▶ Abstract
- ▶ Export Citation

Tools

- ▶ Print
- ▶ Bookmark
- ▶ Email this page

Early Alert

Subscribe to our [Early Alerts](#) for the latest journal issue contents.

4964
P.158



Search

Advanced Search

- ▶ [Journal Home](#)
- ▶ [General Information](#)
- ▶ [Scope](#)
- ▶ [Editorial Board](#)
- ▶ [Editorial Contacts](#)
- ▶ [Print Publication Dates](#)
- ▶ [Online Content](#)
- ▶ [For Authors](#)
- ▶ [For Referees](#)
- ▶ [How to Order](#)

Most Read

Visit our [Most Read](#) page regularly to keep up-to-date with the most downloaded papers in this journal.

Early Alert

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

Table of Contents



Reproduction, Fertility and Development

Volume 22 Number 1 2010

Proceedings of the Annual Conference of the International Embryo Transfer Society, Córdoba, Argentina, 9–12 January 2010
Full Papers and Abstracts for Poster Presentation

IETS 2010 author index

pp. 383-393
[PDF \(112 KB\)](#)

IETS 2010 abstracts

pp. 159-381
[PDF \(3.5 MB\)](#)

Recipient of the 2010 IETS Pioneer Award: Reuben John Mapletoft, DVM, MSc, PhD

pp. xxxv-xxxviii
[PDF \(185 KB\)](#)

Coordinated regulation of follicle development by germ and somatic cells

Mario Binelli and Bruce D. Murphy
pp. 1-12
[Abstract](#) | [Full Text](#) | [PDF \(1.3 MB\)](#)

Mammalian oocyte development: checkpoints for competence

Trudee Fair
pp. 13-20
[Abstract](#) | [Full Text](#) | [PDF \(208 KB\)](#)

Is the zona pellucida an efficient barrier to viral infection?

A. Van Soom, A. E. Wrathall, A. Herrier and H. J. Nauwynck
pp. 21-31
[Abstract](#) | [Full Text](#) | [PDF \(525 KB\)](#)

Towards the use of microfluidics for individual embryo culture

R. L. Krisher and M. B. Wheeler
pp. 32-39
[Abstract](#) | [Full Text](#) | [PDF \(341 KB\)](#)

Challenge testing of gametes to enhance their viability

Henrik Callesen
pp. 40-46
[Abstract](#) | [Full Text](#) | [PDF \(169 KB\)](#)

Applications of RNA interference-based gene silencing in animal agriculture

Charles R. Long, Kimberly J. Tessanne and Michael C. Golding
pp. 47-58
[Abstract](#) | [Full Text](#) | [PDF \(244 KB\)](#)

Effects of gamete source and culture conditions on the competence of *in vitro*-produced embryos for post-transfer survival in cattle

Peter J. Hansen, Jeremy Block, Barbara Loureiro, Luciano Bonilla and Katherine E. M. Hendricks
pp. 59-66
[Abstract](#) | [Full Text](#) | [PDF \(270 KB\)](#)

Bovine embryo transfer recipient synchronisation and management in tropical environments

Pietro S. Baruselli, Roberta M. Ferreira, Manoel F. Sá Filho, Luiz F. T. Nasser, Carlos A. Rodrigues and Gabriel A. Bó
pp. 67-74
[Abstract](#) | [Full Text](#) | [PDF \(305 KB\)](#)

Pregnancy recognition and abnormal offspring syndrome in cattle

C. E. Farin, W. T. Farmer and P. W. Farin
pp. 75-87
[Abstract](#) | [Full Text](#) | [PDF \(286 KB\)](#)

Delivery of cloned offspring: experience in Zebu cattle (*Bos indicus*)

Flávio V. Meirelles, Eduardo H. Birgel, Felipe Perecin, Marcelo Bertolini, Anneliese S. Traldi, José Rodrigo V. Pimentel, Eliza R. Komninou, Juliano R. Sangalli, Paulo Fantinato Neto, Mariana Tikuma Nunes, Fábio Celidonio Pogliani, Flávia D. P. Meirelles, Flávia S. Kubrusly, Camila I. Vannucchi and Liege C. G. Silva

Major Announcement

New Editor-in-Chief
Professor Tony Flint has been appointed to lead *Reproduction, Fertility and Development*.

Related Product

RNA Interference
An introduction to the phenomenon of RNA interference.
[More](#)

Related Special Issues

Beyond the Platypus Genome:
[comparative genomics, sex and reproduction and evolution, comparative genomics and monolreme biology.](#)