

P0443

## Development of Artificial Insemination Techniques with a Minimum Numbers of Insemination Spermatozoa using Laparoscopy

Lee, J.H.<sup>1,2</sup>, S.J. Park<sup>1</sup>, I.S. Ryu<sup>1</sup>, G.Y. Chung<sup>1</sup>, S.H. Choi<sup>1</sup>, D.Y. Ji<sup>2</sup>, C.K. Kim<sup>3</sup> and S.H. Baek<sup>4</sup>

<sup>1</sup>National Livestock Research Institute, R.D.A., <sup>2</sup>Good Gene Co.,

<sup>3</sup>Chungang Univ., <sup>4</sup>Baekseok College

This study was conducted to investigate the effect of the number of spermatozoa and insemination section(field) of reproductive organs at artificial insemination using laparoscopy(Fiber optic laparoscopic system, Good-Gene Co., Korea) in deer(Elk) and cattle. Twenty six elk does and fifteen cows were inserted CIDR into virginia during 12~14 days for synchronization of estrus. After removal of CIDR, they were injected with hCG 500 IU i.m. at 18 hours for follicular growth and with GnRH 300 µg i.m. at 48 hours for ov-synch. They were lalaroscopic inseminated at at 26~28 hours after injection of GnRH(Fig. 1).

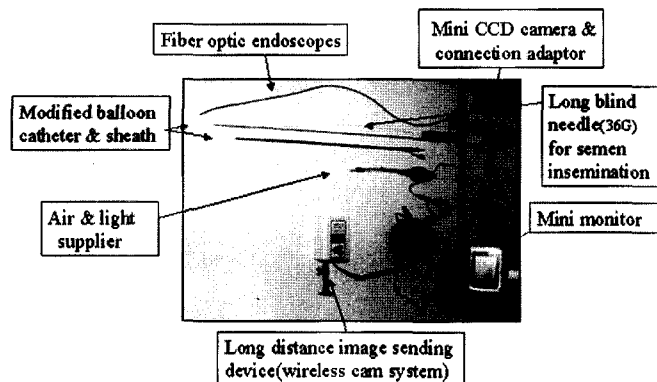


Fig. 1. Laparoscopic artificial inseminator system.

Conception rate was the highest as a 50% when frozen semen( $2 \times 10^7$  sperm/dose) was inserted into uterus tube at laparoscopic insemination than any other treatment in deer, but there was no significantly difference among treatment( $p > 0.05$ ). To compare the conception rate of AI methods and the numbers of insemination spermatozoa, when rectal palpation AI and laparoscopic AI were conducted by the concentration of  $1 \times 10^7$  sperm/dose and  $2 \sim 4 \times 10^7$  sperm/dose conception rate were appeared highly at laparoscopic AI as a 66.7% in cattle.

Key words: *Deer, Cattle, Laparoscopy, Spermatozoa, Conception rate*