

## EFFECT OF INSEMINATION TIMING FOLLOWING 5 OR 7 DAYS CIDR CO-SYNCH IN NILI RAVI BUFFALO HEIFERS

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The aims of the present study were to compare the pregnancy rates in relation to optimal time of AI 5-day or 7-day CIDR Co-synch in Nili Ravi buffalo heifers. A sum of eighty Nili Ravi buffalo heifers were randomly separated into two treatments. First treatment (n=40) was subjected to controlled internal drug release (CIDR) containing 1.38 grams progesterone for 5 days while the second treatment (n=40) received CIDRs for 7 days. On CIDRs removal both treatments received 150 µg of prostaglandin intramuscularly. Furthermore, after CIDRs removal each treatment was divided into two subgroups regarding timing of AI. In 5-day CIDR Co-synch (n = 20) animals were injected 100 µg of GnRH intramuscularly and inseminated co-currently at 72 hrs after CIDRs removal and the remaining half (n=20) were injected and inseminated co-currently at 84 hrs of CIDRs removal. Similar treatments were given to the 7 days CIDR Co-synch group after 72 hrs and 84 hrs of CIDRs removal. Artificial insemination was done by using frozen, thawed semen of a buffalo bull. An ultrasound was performed for follicular dynamics, ovulation and pregnancy rates. The follicular growth rate was tended to be high in 7-day as compared to 5-day CIDR Co-synch ( $1.5 \pm 0.3$  vs.  $1.3 \pm 0.4$  mm/day;  $P = 0.060$ ). Ovulatory follicle size was significantly higher in 7-day than 5-day CIDR Co-synch ( $11.8 \pm 1.1$  vs.  $11.1 \pm 1.1$  P = 0.01). Ovulation rate was significantly higher in 7-day CIDR Co-synch as compared to 5-day CIDR Co-synch treatments (95% vs. 80%,  $P = 0.043$ ). There was a non-significant difference in pregnancy rates buffalo heifers inseminated either 72 hrs (30%) or 84 hrs (50%) in 5-day CIDR Co-synch treatment; whereas in 7-day CIDR Co-synch pregnancy rates were higher ( $P < 0.05$ ), at 84 (65% odd ratio = 5.5) than at 72 hrs (25%). In conclusion the buffalo heifers treated with 7-day CIDR Co-synch at 84 hrs improves fertility.

**Key Word:** Buffalo Heifers, CIDR-Co-synch, GnRH, Pregnancy rate, Fixed time artificial insemination.