ASSET Series A (2004) 4 (1): 55-60

ASSET
An International Journal

SUCCESSFUL TRANSFER OF MURRAH BUFFALO EMBRYO INTO PHILIPPINE SWAMP BUFFALO RECIPIENTS BY NON-SURGICAL TECHNIQUE

[1]O.F. SMITH, [2]L.C. CRUZ, [2]P.C. DURAN, [2]H.V. VENTURINA AND [2]F. ADRIANO

[1]Department of Forestry and Wildlife Management,
University of Agriculture, Abeokuta Nigeria.
[2]Philippine Carabao Center, Central Luzon State University,
Munoz, Nueva Ecija, Philippines

ABSTRACT

Efforts were made for non-surgical embryo recovery and transfer in buffalo cows at the Research Station of the Philippine Carabao Center, Central Luzon State University, Munoz, Nueva Ecija, Philippines. After general clinical examinations and palpation of genital organs per rectum, 11 apparently healthy Murrah buffaloes were selected as donors. All the donor buffaloes were synchronized for oestrus by giving 2 injections of prostaglandin (1 mg fenprostalene, i.m.) at 11 days interval. The animals were randomly divided into 2 groups and given the following treatments. Group 1 (n= 7) received 44 mg of porcine follicle stimulating hormone (pFSH) intramuscularly starting on day 9 of the oestrous cycle for 4 days in tapering schedule twice daily with 12 h interval (7,7, 6,6; 5,5; 4,4 mg). Two injections of $PGF_2\alpha$ each 1 mg (fenprostalene), one on third day evening and the other on fourth day morning, were given intramuscularly. Group II (n=4) animals were given PMSG (pregnant mare serum gonadotrophin) 3,000 I. U. (i.m.) on day 10 follwed by 2 injections of $PGF_2\alpha$ as in group 1. Oestrus detection was done by 24 h visual observations for oestrus symptoms. All buffaloes detected in oestrus were artificailly inseminated with preserved semen twice after 18 h from the onset of oestrus at 12 h interval. The recipient buffaloes were synchronized by 2 injections of $PGF_2\alpha$ 11 days apart, 12 h preceeding the donors. Subsequently, donor buffaloes were flushed on day 5 non-surgically using 2-way foley catheter and a filter. Each horn was flushed with at least 500 ml of phosphate buffered saline containing bovine serum albumin. Of the 7 animals treated with pFSH, a total of 20 ovulations were palpated with a total of 14 embryos recovered of the PMSG treated animals (n=4), 6 Ovulation were palpated with no embryo recovered. The embryos recovered from the pFSH treated animals were then transferred into small culture dishes holding media. Each embroyo was thoroughly examined for its morphology to assure the quality. The degenerated (poor quality) embryos were discarded and the four others (excellent, good and fair) were transferred to 3 recipients non-surgically using embryo transfer guns. Of the 3 recipients, one received two embryos and two animals received one embryo each. Pregnacy diagnosis by rectal palpation was done at 60 days and again at 90 days after the embryo transfer. Out of the 3 recipients, 1 animal successfully carried the embryo till birth. Data on flushing media recovery showed that flushing where medium recovery was 85% and better, the embryo recovery was 100%.

Keywords: Embryo transfer; murrah buffalo; swamp buffalo; recipient; non-surgical technique