

## Effect of Bovine Somatotropin (bST) Treatment on Progesteron Concentration and Pregnancy Rate in Hanwoo

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The purpose of this study was to determine the effect of bST treatment on progesteron concentration, embryo recovery and pregnancy rate following embryo transfer. Donor cows were superovulated with Folltropin-V and PGF<sub>2</sub> $\alpha$  combination method and then inseminated with frozen semen 3 times 12 hrs interval. Donor and recipient cows were assigned to control and bST group, of which was given a single injection of bST (500 mg, sc) at insemination or estrus detection. Embryo collection of superovulated cows were flushed nonsurgical method at 7 to 8 days after artificial insemination.

The concentration of progesterone in bST treatment was significantly different than control at 9, 12 days after bST treatment (4.6 and 6.8 vs. 3.9 and 4.5 ng/ml P4). However, there was not different at 0, 3, 6 days after treatment between bST and control group. The percentage and Mean  $\pm$  S.E. of transferable embryo was not significantly different between control and bST treatment (72.8%/5.9  $\pm$  4.5 vs. 83.7%/5.1  $\pm$  1.6). The percentage and Mean  $\pm$  S.E. of transferable embryo in non-summer season was significantly higher than in summer (81.8%/5.4  $\pm$  2.1 vs. 68.7%/4.7  $\pm$  4.6; P<0.05). The pregnancy rate after embryo transfer in bST treatment was significantly higher than in control (64.0 vs. 47.1%; P<0.05). There was no significantly different between summer and non-summer (51.6 vs. 61.5%; P>0.05).

The results indicated that bST treatment in donor and recipient cows could be improved the efficiency of transferable embryo production and pregnancy rate after embryo transfer, and non-summer season could be better for superovulation treatment and embryo transfer.

Key words) *bovine, embryo transfer, bST, progesteron concentration and pregnancy rate*