

ABSTRACT

DAUD SAMSUDEWA. H4A 004 003. The Effect of Sperm Number Per Insemination Dose to Frozen Semen Quality and Fertility Performance on Ettawah Grade Goat. (Advisor : **M.I. SRI WUWUH** and **YON SUPRI ONDHO**)

The aim of this study is to know the effect of sper number per insemination dose in etawah grade goat frozen semen toward pH Semen, totality acrosomal cap, sperm motility, pregnancy and kidding birth. The study was conducted from August 2005 until April 2006 in Breeding and Reproduction Laboratory, Departemen of Animal Agricultural Diponegoro University, Ungaran Artificial Insemination Center and Goat Breeding Center, Departemen of Animal Agriculture Central Java.

The amount 2 heads of semen Etawah grade bucks used in this study. Those semen will then be frozen at 4 level, comprising are 50, 75, 100 and 125 million sperm number per Insemination dose. Further more, amount of 40 head of Etawah grade ewes used used for observation of pregnancy and kidding birth. Two step of the research was conducted, those were the observation of frozen semen quality and fertility performance. Group random design (RAK) with subdividing time of semen collecting and frozen were designed for phase I, while for the second phase I, while for the second phase t-test were used.

The result of the study indicated that there are significant ($P < 0,05$) of total spermatozoa per insemination dose toward pH semen, totali acrosomal cap and sperm motility both of before frozen and after thawing. Degree of pH semen before frozen shows 6,94; 6,84; 6,75 and 6,75. Degree of pH semen after thawing shows 6,74; 6,65; 6,47 and 6,29. Degree of totality acrosomal cap before frozen shows 67,18%; 65,79; 64,33% and 62,08%. Degree of sperm motility before freezing shows 58,00%; 57,10%; 55,70% and 54,60%. Degree of sper motility after thawing shows 48,40%; 47,20%; 45,50% and 43,00%. Pregnant percentage shows non significant, while kidding birth percentage shows significant ($P < 0,05$). Degradation per each of 25 million of spermatozoa per insemination dose will reduce 13,9% of pregnant percentage and 16,1% kidding birth percentage.

The study were concluded that increase of sperm number per insemination will reduce pH Semen, totality acrosomal cap, Sperm motility but increase pregnancy and kidding birth.

Keyword : Sperm number per insemination, frozen semen quality, fertility performance