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COMPARISON OF INTRA CORNUAL AND UTERINE ARTIFICIAL INSEMINATION CONCEPTION RATE IN DAIRY CATTLE

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ABSTRACT

Reproduction plays an important role in dairy cattle and assures economic advantage for breeders. Nowadays in most of industrial dairy cattle in the world artificial insemination is used because of its high reproductively. In this process skill of somebody who inseminates and ways of his action are very important in reproduction of those dairy cattle which have not special problems. One of the ways that increases reproduction rate through artificial insemination is intra cornual and uterine of artificial insemination are compared with each other. In order to verify the procedure one hundred oestrus dairy cattle were chosen and experimented in the time when they were inseminated. In the following: artificial insemination by frigid sperm in cornual containing fulica does not increase significantly rate of reproduction in dairy cattle in comparison of artificial insemination in utera (Pearson Chi-Square test). After visiting local farms and doing artificial insemination of 100 cows were selected randomly that don't have any problem and the study of pregnancy with the help of ultrasound which from 50 cases inoculated into uterus with follicle 35 of them were pregnant and from 50 cases inoculated into body of uterus 31 of them were pregnant reported.

Keywords: Intra corneal, Artificial insemination conception rate, Dairy cattle

INTRODUCTION

Reproductive efficiency of the dairy herd is important to the economic success of the dairy operation. One of the most important reproductive technologies implemented by the dairy industry is artificial insemination [1]. Artificial insemination reduces the incidence

of sexually transmitted diseases among cattle as well as increases the use of genetically superior sires to improve performance of the herd [2]. Standing estrus or “heat” is the most reliable indication that a cow is going to ovulate and release an ovum or “egg.” Estrous behavior is used to determine when a cow should be inseminated [3]. A brief window of opportunity exists for fertilization of the egg and pregnancy of the cow to occur [4]. It is estimated that the U.S. dairy industry loses more than \$300 million annually due to failure and/or misdiagnosis of estrous detection. Thus, the efficient and accurate detection of estrus and the proper time of insemination are of utmost importance if dairy producers want to increase reproductive efficiency of the herd [5].

Estrous synchronization programs provide an organized and efficient approach to administering artificial insemination (AI) and the improvement of reproductive performance. Synchronization programs facilitate AI by altering the length of the estrous cycle and (or) through manipulation of follicular growth, thereby making the occurrence of estrus more predictable or allowing for appointment breeding (timed AI) without detection of estrus [6]. Although protocol compliance (accurate cow identification, appropriate drug dosages,

correct time and day of treatment and route of administration) is very important to the success of an estrous or ovulation synchronization program, many other factors are also important [7]. These factors include: a) semen handling, number of sperm deposited, and the site of insemination, b) semen quality, i.e., “compensable” and “uncompensable” seminal traits, c) fertilization status and embryo quality, and d) the bull effect and time of AI.

MATERIALS AND METHODS

In this study, we visit several industrial dairies located in the Mianeh city and from oestrus and reached to insemination age heifers (Weight: up 350 kg, Height: 135 cm and age: up to 18 month) without any clinical problem, reproductive and obstetric two categories were selected randomly. To avoid of any risk or in other words to lowering the margin of error, the information about nutrition and signs of oestrus were to farmer.

We prepare a list that contain number of cows, date of insemination, name of farmer, sperm number and other information was setting delivered to farmer and copy of it was stored in archive studies.

In this study, all of heifers were in similar situation and oestrus synchronization done that we used CIDR of Abureihan Company. Animal were receive CIDR for 9 days in

sterile condition and 24 hours after CIDR removal were received estradiol benzoate at the dose of 1 mg/kg. Finally after 12 hours signs of oestrus were detected and we inseminated heifers with sperms that buy from North West breeding center in the best condition and the temperature of liquid nitrogen were -192 C. After 30 to 40 days heifers were ultrasound.

RESULTS

Study was conducted to compare the fertility rate of artificial insemination into the body of uterus a uterine containing follicle in cattle. After visiting local farms and doing artificial insemination of 100 cows were selected randomly that don't have any problem and the study of pregnancy with the help of ultrasound which from 50 cases inoculated into uterus with follicle 35 of them were pregnant and from 50 cases inoculated into body of uterus 31 of them were pregnant reported.

By using Chi 20 following results were obtained. Test results show that two different inoculation methods don't different from the perspective of pregnancy.

DISCUSSION

Today all the techniques used in livestock is based on this principle that it's economic and can fertility rate learn new technique [8]. To achieve this, the comparison of fertility rate of

artificial insemination into the uterine horn and uterine body containing follicle in cattle done.

Test results show that two methods don't different from each other. In one study by Vandermark and Salisbury in 1951 the pregnancy rate of uterine body and uterine horn showed that deposited, use of diluted sperm, fertility of heifers in both are same and have not significant impact on fertility and conception fertility in both methods may be almost are same [9]. Also in study by Lenz and Mckenna in 1990, in compare fertility rate in cattle inoculated with intra uterine and intra cervix only minor differences were observed [10] that in continuo Fleming and Mitchel in other study in artificial insemination technique tend to support the uterine body insemination that didn't have enough experience about this document and in their study stated that artificial insemination technique one of the best way for sperm to reach to egg in a cows reproductive system [11]. So, that would be effective in improving fertility. In order to verify the procedure one hundred estrus dairy cattle were chosen and experimented in the time when they were inseminated. In the following: artificial insemination by frigid sperm in cornual containing fulica does not increase significantly rate of reproduction in

dairy cattle in comparison of artificial insemination in utera.

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