

DIMINISHING BUFFALO COWS OVARIAN ACTIVITY DURING STABULATION USING HORMONAL PRODUCTS BASED ON PROSTAGLANDIN

Adrian BOTA¹, Florin GRIGORE¹, Gheorghe Emil MARGINEAN²

¹Research and Development Station Sercaia for Buffalo Breeding, 2 Street Field, Sercaia, 507195, Brasov County, Romania, Tel /Fax: 40268245890, Email: scdcb.sercaia@yahoo.com

²University of Agronomic Sciences and Veterinary Medicine of Bucharest, 59 Mărăști Blvd, District 1, 011464, Bucharest, Romania, Phone: +4021.318.25.64, Fax: + 4021.318.25.67

Corresponding author email: adrianbota68@yahoo.com

Abstract

There is considered that if buffalo cow fertilization has not occurred before entering the barn to be protected against the cold weather of the winter she will get in anestrus state and new heats will delay for a long time. The present paper refers to the results of a prostaglandin PGF_{2α} derivate treatment of 44 cases of after calving anestrus in buffalo cows registered during the housing period in the last 4 years. The buffalo cows aged between 6 and 14 years. The time interval from the former last heat was over 90 days. The treatment consists of intra muscular injection 2 ml of one of cloprostenol derivates. After the first injection 15 buffalo cows out of 44 ones came in heat within 5 days. All of them were two times inseminated artificially at a 12 hours interval. Out of them 12 buffalo cows became pregnant. The other 29 buffalo cows have received a second doze of prostaglandins 11 days after the first treatment. All of them have received blind insemination after 48 and 72 hours from the second treatment. This time 9 buffalo cows became pregnant. Result of the treatment has to be considered as a good one since 24 cows out of 44 treated cases (54, 55%) became pregnant. Perhaps 14 buffalo cows didn't react to the treatment. Nevertheless the price of the 73 doses of prostaglandin used for the treatment is lower compared to the feeding cost saved by shortening the buffalo cows what became pregnant.

Key words: anestrus, artificial insemination, buffalo cows, calving interval, prostaglandins.

INTRODUCTION

Calves period of buffaloes, which lasts five months a year, is diminishing consequences of their reproductive function, manifested primarily by the absence of heat. Because at this time there are large fluctuations in temperature and humidity, animals have no possibility of movement and nutrition is poor in terms of quality, it was found that about 80% of heat are discrete not conclusive as to the cow (Bogdan et al., 1981; Ilinca et al., 1993).

MATERIALS AND METHODS

The work was done over four years and consisted in the administration of hormonal based PGF_{2α} who followed there sumption of sexual cycle, with the advent of heat followed artificial insemination or natural service using luteolytic effect of prostaglandin. Following transrectal examination were identified 44

anestrus buffaloes with a period of more than 90 days after calving, aged 6 to 14 years old and a very good state of repair. The protocol consisted of PGF_{2α} administration, tracking the occurrence of heat and artificial insemination or natural service. The buffaloes showed no heat, yet received a dose of PGF_{2α} 11 days after the first inoculation was followed occurrence heat, the heat not demonstrating blind artificial seeding is performed at 72 hours and to 96 hours.

RESULTS AND DISCUSSIONS

Ovarian response following treatment with prostaglandins is shown in table 1. Although detection of ovarian formations is more difficult than the buffalo cows because of the small size of the ovaries, following a correct diagnose is by transrectal examination, it can act to revive hormonal ovarian function and thus to obtain gestation and during this

period of the year. Also it was found that animals disrepair maintenance, those with advanced age or those who have experienced various problems in the post-partum, did not respond positively to this treatment. Buffalo

bull daily presence around the female, is beneficial, even if it has allow libido (Braselli et al, 1997; Vidu et al., 2011).

Table 1. Ovarian response following the treatment with prostaglandins

| Year | Buffaloes treated | Drugs used | The first administration of PGF _{2α} | | A second injection of PGF _{2α} | | | | Total gestation | Birth rate % |
|--------------|-------------------|------------|---|-----------|---|-----------|--|-----------|-----------------|--------------|
| | | | Artificial insemination | Pregnancy | Artificial insemination | Pregnancy | Artificial insemination to 72-96 hours | Pregnancy | | |
| 2011 | 13 | Flavoliz | 3 | 3 | - | - | 10 | 3 | 6 (46%) | 67 |
| 2012 | 15 | Prosolvlin | 4 | 4 | 2 | 2 | 9 | 2 | 8 (53%) | 72 |
| 2013 | 6 | Enzaprost | 2 | 2 | - | - | 4 | 1 | 3 (50%) | 90 |
| 2014 | 10 | Prosolvlin | 6 | 3 | 2* | 1 | 2 | - | 4 (40%) | 87 |
| Total | 44 | - | 15 | 12 | 4 | 3 | 25 | 6 | 21 (48%) | - |

* - natural service

CONCLUSIONS

Use preparations based on PGF_{2α} helps increase the percentage of gestation and hence living products and increasing the milk produced.

Method is beneficial especially for households where buffaloes are usually sexual inactivity in winter, the cost of treatments accessible. Method helps to extend artificial insemination, especially in private breeders accustomed only natural service, usually during this period.

REFERENCES

- Braselli S.P. et al, 1997. Ovarian follicular by nomeres during the estrous cycle in buffalo. *Technology*, 44(8).
- Bogdan A.T. et al., 1981. *Livestock reproduction*. Scrisul romanesc Publishing House, Craiova.
- Creta V. et al., 1993. Some indices of breeding and their influence on buffaloes milk production. *Lucr. Stiintifice USAMV, seria C, Vol XXII*, Bucharest.
- Ilinca N. et al., 1993. Research on the introduction of the polioovulatiei to buffalo cows. *Lucr. Stiintifice taurine, vol. 14*, Bucharest.
- Vidu Livia, Udriou Alina, Popa R., Băcilă V., Popa Dana, 2011. Research on the influence of season on quantitative and qualitative milk buffalo, *International Scientific Symposium: „Tradition, performance and efficiency in animal husbandry”-60 years of animal science higher education in Moldova, aprilie 14-15, vol. 56, seria Zootehnie, Iași*, 88-91.