

TITLE: Factors affecting the efficiency of embryo transfer programs: the old donor mare

ABSTRACT:

The donor mare is the heart of any embryo transfer program. Old mares are a constant in this type of programs, since they have already proved their worth and already have descendants that demonstrate their quality. The purpose of this study was to evaluate the reproductive parameters affecting the efficiency of an embryo transfer program and understand the importance of the old donor mare in the efficiency of this type of programs. Data from an embryo production center in Argentina were analysed considering three reproductive seasons. The reproductive parameters analyzed were: ovulation rate, embryo recovery rate, recovery efficiency, pregnancy rate and embryonic mortality rate. The continuous variables were analyzed by GLM / MANOVA and the categorical variables by Chi-square tests, for a minimum significance level of 5% ($p < 0.05$). The category old of donor mares significantly and negatively affected the rates of embryo recovery, recovery efficiency and pregnancy. In contrast, the ovulation rate and the embryonic mortality rate were significantly and positively affected. Also, the incidence of hemorrhagic anovulatory follicles, endometritis post artificial insemination and multiple ovulation was significantly higher in the category old of donor mares than in the category young. It is concluded that the category old of donor mares represents one of the most important variables to take into account in the efficiency of an embryo transfer program. In this category of mares it is relevant to monitor the mare both before and after artificial insemination, attempting to identify and treat cases of endometrial inflammatory reaction, prior to embryo recovery.

KEY WORDS: embryo transfer; donor mare; old mare; reproductive efficiency