Artificial insemination and fertility performance in ostrich (*Struthio camelus*)

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This experiment was conducted to study the effect of artificial insemination using diluted semen in female ostrich and to study the fertilizing parameters like fertility, hatchability and embryonic mortality. Artificial insemination was carried out intravaginally in 10 female ostriches by using extended semen with 1:3 dilutions by using IMV commercial diluent. Voluntary crouch method was used for artificial insemination, in which the female ostrich crouched on their own accord. A total of 302 eggs (177 eggs from natural mated group and 125 eggs from artificially inseminated group) were utilized for this study. Fertility was calculated after deducting infertilities from the total number of eggs set. Hatchability on total eggs set and on fertile eggs set was calculated. Embryonic mortalities were calculated based on fertile eggs set. A highly significant (P<0.01) per cent fertility was recorded in artificially inseminated group than naturally mated group and the values were 23.2 and 9.60 per cent, respectively. The per cent total hatchability had shown significant (P<0.05) difference between artificially inseminated and naturally mated groups and the values were 12.80 and 5.08 per cent, however no significant difference were observed for fertile hatchability among the two groups and the values were 55.17 and 52.94 per cent, respectively. The per cent mid, late and total embryonic mortality in artificially inseminated and naturally mated group were 20.68, 24.14 and 44.82; and 23.53, 23.52 and 47.05, respectively, and no significant differences were observed in all forms of embryonic mortality between the two groups. Based on the above results it is concluded that artificial insemination had significantly improved the fertility and total hatchability compared to natural mating in ostrich. Artificial insemination in ostrich has not been attempted so far even any international research institutes / commercial breeders and this is the only maiden attempt, made systematically in ostrich, which brought out encouraging results and proved worthwhile.