Title: Twice daily collection yields greater semen output and does not affect male libido in the ostrich

Authors: Bonato, M., Rybnik, P.K., Malecki, I.A., Cornwallis, C.K. & Cloete., S.W.P.


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The success of an artificial insemination program in ostriches is highly dependent on the yield of viable semen. We, therefore, tested how semen output is affected by three different collection frequencies: once every 2 d (48 h interval), daily (24 h interval), and twice a day (6 h interval). Ejaculates were collected from seven male ostriches (aged 2–4 years) for 10 consecutive days using the dummy female method. We assessed semen characteristics (sperm motility, volume, concentration, number of sperm per ejaculate and sperm viability) and male libido (the delay between the presentation of the dummy and ejaculation, and the willingness to mount the dummy). The total daily output of semen and the number of sperm were greater at the 6 h collection interval than at the 24 h or 48 h interval while sperm motility and viability were not affected. At the 6 h interval, the number of live normal sperm increased over the treatment period while the number of live abnormal sperm was reduced. Furthermore, the time that males took to mount the dummy and their willingness to copulate with the dummy were unaffected by collection frequency. Across males we observed great individual variation in both semen characteristics and libido suggesting there is the potential to increase the efficiency of semen collection by selecting superior males. These results indicate not only that two collections per day yield maximum semen output and may improve semen viability, but also that quantifying variation between males may help further increase semen collection efficiency

Keywords: ostrich – semen collection frequency, sperm viability, sperm morphology, sperm motility, Struthio camelus