SOME REPRODUCTIVE ASPECTS OF EGYPTIAN BUFFALO BULLS

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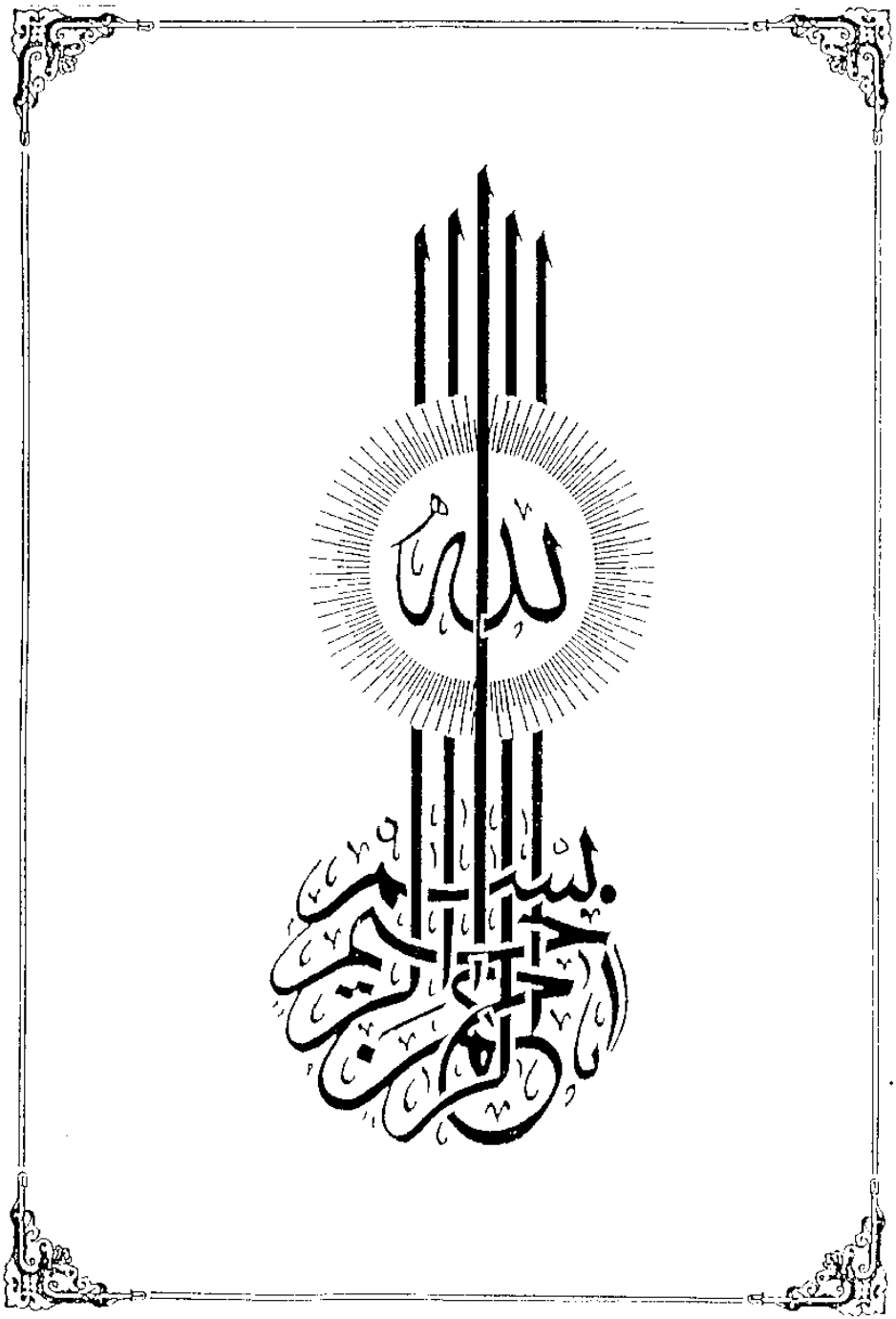

Approval Sheet

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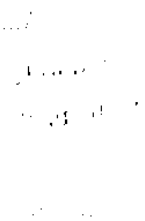

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ABSTRACT

Khaled Tawfik Mohamed Osman. Some Reproductive Aspects of Egyptian Buffalo Bulls. Unpublished Doctor of Science, University of Ain-Shams, Faculty of Agriculture, Department of Animal Production, 1996.

The thesis comprised three separate studies:

Study I: This study aimed at the evaluation of the anatomical and histological development of genital organs in 27 young and pubertal buffalo bulls of ages ranging between 1-24 mo. Blood testosterone levels, development of mating behavior, age at penile separation and at first donation of semen were also investigated.

The results of this study have shown that appropriate feeding and professional management are the two basic requirements for the achievement of early puberty and maturity in buffalo calf bulls .

Study II: This study aimed at the evaluation of group-mating as a system of breeding frequently used for breeding buffalo cows in many governmental and private farms. The results of 10 fertility trials (mating groups) utilizing 3 tested buffalo bulls and 188 mature females, were analyzed. The impact of this system of breeding on the reproductive performance of buffalo bulls was scrutinized throughout a one year round.

It has been concluded that the current system of breeding does not suit the existing situation of the shortage of genetically tested buffalo bulls in Egypt .

Study III: A new untraditional method for freezing buffalo semen was evaluated. The semen was collected from 3 tested buffalo bulls over a period of 14 weeks at the rate of 2-3 successive ejaculates/bull/week. During this period, the semen was evaluated, sorted, initially treated with the broad spectrum antibiotic "Cephapirin", extended in a pre-frozen tris based

extender, processed and finally stored in LN for periods of 1 day, 1 month, and 2 months. Sperm motility was assessed at each stage of semen processing and storage. The impact of thawing regime on sperm motility, viability and morphology was also studied. In addition, a pilot AI trial comprising 48 buffalo cows was conducted to check the fertility of frozen semen.

The results have shown that the current methodological procedures are suitable for successful freezing of buffalo semen.

Key words: Puberty - Male buffalo - Testosterone - Single sire herd breeding - Libido - Pre-frozen extenders - Frozen buffalo semen - Thawing temperature - Cephapirin .

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