

## Reproductive Characteristics of Native Bucks at Different Ages

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**T**HIS STUDY was devoted to evaluate reproductive parameters in native Egyptian bucks. Attention was also directed to evaluate variation of plasma testosterone levels and semen quality as well as correlate between the influence of age and physical body status (body weight, height, crown rump "CR" length and girth) as well as testis length and width in addition to scrotum circumference "SC" of bucks and their reproductive performance. Semen was collected twice a week for 12 successive weeks during the spring season 2006. Semen volume, sperm concentration, mass and progressive forward motility, percentage of live sperm in addition to percent of abnormal sperm as well as total number of live-normal sperm were also evaluated. The obtained data showed that semen volume, sperm motility, percent of live sperm and abnormal sperm, testicular size, scrotum circumferences, libido and testosterone hormone differed significantly ( $P < 0.002$ ) in bucks according to changes in physical conditions. Therefore, it was concluded from the present study that the optimal native bucks expected to be used for either natural service or artificial insemination should be of age  $\geq 2$  years, body weight  $\geq 35.83$  kg, CR  $\geq 63.16$  cm, testis length  $\geq 12.40$  cm, testis width  $\geq 5.30$  cm, SC  $\geq 22.50$  cm, body height  $\geq 70.83$  cm, girth  $\geq 75.33$  cm, libido index (MPD)  $\geq 2.66$  concomitant with serum testosterone level  $\geq 2.30$  ng / ml.

**Keywords:** Egyptian bucks; Semen characteristics; Testosterone; Libido, Age; Physical body conditions.

Sexual behavior and semen quality are the main factors that influence male reproductive efficiency. Factors affecting semen characteristics are important in management practices, especially for the artificial insemination "AI" in any breeding program. Scrotal circumference and semen characteristics have been confirmed to vary with age among different breeds of bucks and also among individual bucks of the same breed (Pandey *et al.*, 1985 and Noran *et al.*, 1998). Although information is available on the semen characteristics of several goat breeds (Pandey *et al.*, 1985 and Ali & Mustafa, 1986) yet knowledge about the semen characteristics of the native Egyptian bucks is scarce. It was previously found that age was one of the major contributing factors associated with differences in scrotal circumference and semen characteristics (Toe *et al.*, 1994), with testicular size being closely related to total sperm output (Oldham *et al.*, 1978; Dufour *et al.*, 1984 and Ahmed & Noakes, 1995). Season of the year seems