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## JOURNAL ARTICLE

# Changes in serum levels of LH, FSH, prolactin, testosterone, and cortisol associated with season and mating in male pygmy goats

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Four male pygmy goats were used in a study designed to determine the effects of season on serum hormone (luteinizing hormone, follicle stimulating hormone, prolactin, testosterone, and cortisol) levels, testis size and libido, and the effects of mating on serum hormone profiles. Seasonal peaks were observed for prolactin in July, luteinizing hormone and follicle stimulating hormone in September, and testosterone in October. Luteinizing hormone peak frequency was greatest in September and was increased by mating activity in the months immediately preceding the breeding season. Scrotal circumference did not vary with season and libido showed no consistent seasonal pattern. Mating appeared to raise all hormone levels except during the months when these hormones were seasonally elevated. When episodic releases of luteinizing hormone occurred, they were associated with subsequent rises in serum testosterone levels. On some mating days, when episodic releases of luteinizing hormone were absent, changes in testosterone levels were highly correlated with changes in cortisol levels. It was concluded that both season and mating influence reproductive hormone levels in male pygmy goats.

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