

HORMONES 101

Hormones are chemicals that coordinate different functions in the body. They play a crucial role in reproduction, growth, and development in sheep/goats.

Hormone	Function in body	Management application
Cortisol	Crucial role in stress response, metabolism, and immune function	Not typically administered
Estrogen	Regulates estrus cycle. Causes outward signs of heat.	Induce or synchronize estrus when breeding out-of-season.
Follicle stimulating hormone (FSH)	Stimulates growth of ovarian follicles and prepares eggs for ovulation.	Increase number of eggs released at ovulation (superovulation)
Gonadotropin releasing hormone (GnRH)	Stimulates release of LH and FSH from pituitary gland	Estrous synchronization
Luteinizing hormone (LH)	Has role in ovulation and maintenance of corpus luteum (CL)	Induce superovulation
Melatonin	Plays role in seasonal reproduction	Improve out-of-season breeding Advance puberty in young females Promote growth and development
Oxytocin	Involved in uterine contractions, milk ejection, and maternal bonding.	To help pass placenta To stimulate milk letdown
Progesterone	Maintains pregnancy. Prevents cycling.	Estrous synchronization Out-of-season breeding
Prolactin	Essential for milk production after parturition	Not typically administered
Prostaglandin	Causes CL to regress, leading to a decrease in progesterone and return to estrus. Initiation of labor and expulsion of placenta	Estrous synchronization Induce labor in goats
Testosterone	Influences growth and sexual behavior in males	Not typically administered

