

## IMPROVING REPRODUCTIVITY OF HEAT STRESSED RAMS USING GnRH or MELATONIN IN SUBTROPICS

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Twelve rams and forty-eight ewes ( $\frac{1}{2}$  Finland x  $\frac{1}{2}$  Rahmani) were used to study the possibility of using GnRH or Melatonin to improve the reproductive efficiency under hot summer conditions. The animals were divided into three equal and similar groups. The 1<sup>st</sup> group of rams was subjected to intramuscularly injection of saline solution (0.9% NaCl) as a control group. The 2<sup>nd</sup> group was intramuscularly injected with GnRH and the 3<sup>rd</sup> groups received Melatonin orally.

GnRH treatment improved ( $P < 0.05$ ) the heat-stressed rams libido, mating activity, fertility, serum testosterone, semen-ejaculate volume and total sperm output than in the control. Meanwhile sperm motility, dead spermatozoa, abnormalities, acrosomal integrity and sperm cell concentration did not change appreciably as a function of this treatment.

Treatment heat stressed rams with Melatonin increased ( $P < 0.05$ ) mating activity and fertility but the other reproductive performance traits did not differ than the control.

**Key words:** Heat stress, GnRH, Melatonin, reproductive performance, rams.