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HORMONAL CONTROL OF ESTRUS IN THE NON-BREEDING SEASON OF TURCANA BREED SHEEP

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• Introduction - General aspects of sheep reproduction

✓ Reproduction management in sheep microfarms is a key element in increasing fertility, birth rate and economic and financial impact at the farm level.

✓ Fertility in microfarms is influenced by the ability to induce estrus and ovulation in non-breeding season, as sheep are acyclic animals.

✓ The current concerns of many groups of researchers are related to studies on the mode of action of hormonal preparations for inducing and synchronizing estrus, respectively stimulating ovulation in sheep in the non-breeding period to ensure increased birth rates in microfarms.

✓ Factors that influence estrus induction and ovulation can be represented by: breed, season, photoperiod, duration of the lactation period, nutritional and health status of the sheep, duration of the postpartum period, the ratio between the number of rams and ewes, the time of introduction of the ram into the flock, administration of hormonal preparations, type of hormonal preparation and administration schedule.

• Hormonal treatments for induction and synchronization of estrus in sheep

✓ The administration of hormonal preparations in sheep plays a major role in the synchronization of estrus and the control of reproduction in non-breeding season: among the hormones most frequently used for this purpose we mention:

- ✓ progestogens,
- ✓ PGF2α and its analogues,
- ✓ pregnant mare serum gonadotropin (PMSG or eCG),
- ✓ gonadotropin-releasing hormone (GnRH),
- ✓ melatonin which is administered alone or in combination with other hormones.

✓ Among these, progestogens are the most frequently used during but also in non-breeding season, PGF2α and its analogues are used during the breeding season, and melatonin is usually used in non-breeding season.

Conclusions

✓ The use of hormonal preparations in the induction and synchronization of estrus in sheep represents the first step and the key element for stimulating reproductive function, the use of progesterone or its analogues, in association with other hormones can lead to remarkable effects of improving fertility, noted by increasing the number of calvings in the non-breeding season. Identifying efficient methods of induction and synchronization of estrus, followed by a quality mating can lead to increased fertility, fecundity, prolificacy and productivity from an economic point of view at the level of sheep farms.

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