

TECHNICAL NOTES



Gonadorelin Injection



Active Constituents

100 µg/mL GONADORELIN (as ACETATE)

Indications

For use in oestrus synchronization programs in combination with PGF2 α . For the treatment of cystic ovaries, prevention of delayed ovulation and improvement of postpartum fertility in cattle.

Dosage & Administration

Discard all open vials 28 days after broaching.

Cattle: Injection to be given into the anterior half of the neck.

Cystic ovaries: 5 mL (500 µg Gonadorelin) by intramuscular injection.

Prevention of delayed ovulation: 2.5 mL (250 µg Gonadorelin) by intramuscular injection.

Improvement of postpartum fertility: 2.5 mL (250 µg Gonadorelin) by intramuscular injection.

Oestrus synchronization: 1 mL (100 µg Gonadorelin) per dose by intramuscular injection, for example:

Day 0 1 mL (100 µg gonadorelin)

Day 7 2 mL PGF2 α

Day 9 1 mL (100 µg gonadorelin)

Insemination 8-24 hours after 2nd elevation+ Gonadorelin Injection.

General Directions

DESCRIPTION:

elevation+ Gonadorelin Injection is a clear, colourless, sterile solution containing 100 µg/mL of gonadorelin (as acetate). Gonadorelin is a synthetic decapeptide, identical to the endogenous Gonadotropin Releasing Hormone (GnRH), which controls the production, and secretion of Luteinising Hormone (LH) and Follicle Stimulating Hormone (FSH) by the pituitary gland. Both LH and FSH have a direct effect on the ovary: FSH stimulates follicle development, while LH induces ovulation and luteinisation. Injection of gonadorelin acetate induces the simultaneous release of FSH and LH thereby stimulating the maturation of ovarian follicles, ovulation and development of the corpus luteum.

INDICATIONS:

1: OESTRUS SYNCHRONISATION

Oestrus synchronisation protocols involving the use of Prostaglandin F2 (PGF2 α) and Gonadotropin Releasing Hormone (GnRH) have been subjected to extensive study in dairy herds around the world. Comparisons have been made between GnRH/PGF2 α synchronisation programs and a variety of existing reproductive management programs of varying levels of intervention. GnRH/PGF2 α protocols have measured favourably against standard prostaglandin programs in terms of reproductive parameters such as pregnancy rate and calving to conception interval.

Unlike previously implemented synchronisation protocols utilising PGF2 α only, application of the GnRH/PGF2 α protocol described below results in synchronisation of ovulation to the degree of precision that allows fixed-time insemination.

A reproductive program using fixed-time insemination provides numerous benefits both in terms of reduced management input and economic advantages. Fixed-time insemination reduces management input through the insemination of large groups of cows together, and by elimination of the need for oestrus detection activities in the first round. The benefits are magnified in situations where the level of oestrus detection is low. Economic benefits of a fixed-time insemination program result from a reduction in calving to conception interval and a tighter calving pattern, parameters of particular significance under seasonal calving conditions.

GnRH/PGF2 α protocols have the added advantage of demonstrated success for simultaneous treatment and synchronisation of cows suffering from cystic ovarian disease, and the ability to stimulate and synchronise the oestrous cycle of previously anovulatory cows.

The GnRH/PGF2 α protocol that has received the most interest and study for its applicability to dairy cattle reproductive management may be summarized as follows:

Day 0 GnRH administration

Day 7 PGF2 α administration

Day 9 GnRH administration

(48 hours after PGF2 α)

Insemination 8–24 hours after 2nd GnRH.

Insemination is performed at a fixed time 8 to 24 hours after the 2nd GnRH dose, regardless of the presence or absence of visible oestrus.

The rationale behind the GPG (Gonadotropin-Prostaglandin-Gonadotropin) protocol is as follows:

1. The initial GnRH dose induces either ovulation or luteinisation of the dominant follicle present at the time of treatment, and the smaller follicles undergo atresia. A new follicular wave is subsequently recruited, and a new dominant follicle gradually emerges.
2. 7 days after treatment with GnRH, administration of PGF2 α causes luteolysis of the GnRH-induced corpus luteum. The new dominant follicle is ready to ovulate 2–3 days later.
3. The 2nd GnRH dose induces an LH surge which further synchronises the dominant follicle, resulting in ovulation of predictable timing, allowing fixed-time insemination 8–24 hours later.

GnRH/PGF2 α oestrus synchronisation protocols are intended for lactating dairy cattle.

Variable results are reported in the literature of the application of GnRH/PGF2 α in heifers.

2: PREVENTION OF DELAYED OVULATION

Delayed ovulation can result in the reduction of the rate of conception due to asynchrony between ova and sperm at the time of artificial insemination (AI).

Delayed ovulation can be prevented by the administration of elevet+ Gonadorelin Injection, which stimulates the release of LH and hence induces ovulation.

3: IMPROVEMENT OF POSTPARTUM FERTILITY

It is important that normal ovarian cyclical activity resume in the early post-partum period to minimise the calving to conception interval or “days open”. elevet+ Gonadorelin Injection given in the first 40 days of the postpartum period may initiate the ovarian cyclical activity to resume and reduce the incidence of postpartum infertility in cows.

4: TREATMENT OF CYSTIC OVARIES

Cystic ovaries are an infertility problem in dairy cattle, which may be of single or multiple and of follicular or luteal origin. Clinical signs of ovarian cysts include irregular oestrous cycles, anoestrus and nymphomania. Ovarian cysts can be diagnosed by rectal palpation of the structure on one or both ovaries. Treatment of cystic ovaries with elevet+ Gonadorelin Injection may result in the recommencement of normal cyclical activity, through the response of ovarian cysts to the released LH induced by elevet+ Gonadorelin Injection.

Withholding Periods

MEAT: Zero (0) days

MILK: Zero (0) days

Trade Advice

EXPORT SLAUGHTER INTERVAL (ESI): An ESI has not been established for this product. Note – observing the meat withholding period may not be sufficient to mitigate potential risks to export trade. Trade advice should be sought from AVet Health Ltd on 1300 28 38 28 before using this product.

First Aid Instructions

If poisoning occurs, contact a doctor or phone the Poisons Information Centre on 13 11 26 (Australia).

Safety Data Sheet

For Safety Data Sheet see www.avet.health

Disposal

Dispose of container by wrapping with paper and putting in garbage.

Storage

Store below 25 °C (air conditioning). Protect from light.

Poisons schedule

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Registration Number

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