Noroprost

Name:	**Noroprost**
Category:	**Other Products**
Region:	**United Kingdom**

Presentation:

Noroprost is a clear sterile aqueous solution for injection, containing 5 mg/ml Dinoprost, with 0.25 % w/v Phenol Ph.Eur as an antimicrobial preservative. Dinoprost is the synthetic, nature-identical prostaglandin F2a (PGF2 a).

Product Uses:

Noroprost is indicated for its luteolytic effect on corpora lutea in cattle. This luteolytic action of Noroprost may be utilised as follows.
1. To improve control of the time of oestrus in cycling cattle.
2. To control breeding in cattle.
3. To induce parturition in cattle.
4. Synchronisation of recipient cattle for embryo transplantation.
5. To induce abortion in cattle.
6. To treat cattle which have a functional corpus luteum but do not express behavioural oestrus (sub-oestrus or silent heat).
7. For treatment of chronic metritis and pyometra in cattle.
8. For treatment of ovarian luteal cysts.

NOTES:
1.Oestrus Control: A normal return to oestrus and ovulation within two to four days after treatment, is expected in individual cows or heifers treated with Noroprost during dioestrus.

This may be utilized as an effective aid for managing oestrus and breeding in individual animals. (Note: Administration of Noroprost to cattle up to four days after oestrus is unlikely to result in luteolysis of the corpus luteum. Noroprost administered within 48 hours of the onset of the next oestrus, may not influence the timing of the oestrus after treatment).

2.Controlled breeding in cattle: Noroprost can be employed as a luteolytic agent to control the timing of oestrus in cycling cattle that have a corpus luteum.

3.Induction of parturition in cattle: On or after day 270 of gestation Noroprost may be used to induce parturition. Parturition occurs one to eight days (average three days) subsequent to administration. Induction of parturition in cattle is advised where there is a risk of oversize calves or when early parturition is desired. Induction is also indicated where pregnancies are complicated by conditions such as mummified or macerated foetuses, hydrops amnii, hydroallantois, etc. Noroprost may be employed to expel a dead foetus from the uterus.

4.Embryo Transplantation in cattle: Noroprost may be used to synchronise oestrus of the embryo recipient with that of the donor.

5.Induction of Abortion: Termination of pregnancy in cattle may be initiated by Noroprost during those stages of pregnancy in which the corpus luteum is sensitive to its action and the corpus luteum is the sole source of progesterone required for the maintenance of pregnancy. Response to administration depends on the stage of gestation. The percentage of animals responding to a single intramuscular injection decreases as the gestation period increases. Approximate percentages responding are 90% within the first 100 days of gestation, 60% within 101 - 150 days of gestation and 40% in animals beyond 150 days of gestation. While in the early stages of gestation abortion usually occurs within one week, as gestation length increases the period to abortion following injection may also

6.Treatment of Sub-Oestrus (no visible oestrus): The syndrome of no visible oestrus in cattle which have normal cyclical activity occurs most frequently in the winter months, at peak lactation in high producing dairy cows and in suckler beef cows. If a corpus luteum is present and ovulation has not occurred in the previous four days, administration of Noroprost will induce luteolysis of the corpus luteum followed by return to oestrus and ovulation.

Breeding of cattle treated with Noroprost for the above indication may be by natural service, artificial insemination at the usual time in relation to observed oestrus, or by fixed time insemination (72 and 96 hours post-treatment).

7.Treatment of metritis or pyometra in cattle: Chronic bovine metritis often occurs subsequent to acute or sub-acute endometritis during the first two or three weeks post-partum; typically, there is an intermittent purulent or mucopurulent discharge. Pyometra describes inflammation of the endometrium with gross dilation of the uterus with pus. Generally the presence of a corpus luteum perpetuates the condition. However luteal regression, through the administration of Noroprost is followed by oestrus, during which the uterine environment is relatively unfavourable to the bacteria involved in the infection. Treatment may have to be repeated after 10-12 days where the condition is long-standing.

8.Treatment of ovarian luteal cysts: Where cystic ovaries associated with persistent luteal tissue and absence of oestrus are diagnosed, Noroprost may be employed to correct the condition and bring about a return to cyclicity.

Dosage Admin:

A single intramuscular injection of the recommended dose of Dinoprost activity is luteolytic provided a functional corpus luteum is present.

CATTLE:

Oestrus control)

Controlled breeding)

Induction of parturition)

Induction of abortion) 25 mg (5 ml)

Treatment of sub-oestrus)

Treatment of metritis/pyometra)

Treatment of ovarian luteal cysts)

On occasions where a response is not observed to the first injection, a second administration of 5 ml Noroprost may be administered 10-12 days after the first injection.

Embryo Transplantation - Two 5 ml (25 mg) injections given at an interval of 10 - 12 days.

Administer by intramuscular injection. Use a sterile syringe and needle and make the injection through an area of clean dry skin. Care should be taken to avoid injection through wet or dirty areas of skin.

Contra Indications:

Prostaglandins of the F_{2a} type can be absorbed through the skin and **may cause bronchospasm or miscarriage**. Care should be taken when handling the product to AVOID SELF-INJECTION OR SKIN CONTACT. Women of child-bearing age, asthmatics and persons with bronchial or other respiratory problems should avoid

	Accidental spillage on the skin should be washed off immediately with soap and water.
Withdrawal Periods:	It is unnecessary to discard milk for human or animal consumption. Animals must not be slaughtered for human consumption during treatment. Animals may be slaughtered for human consumption only after 24 hours from the last treatment. Pregnancy status should be determined prior to injection since Dinoprost has been demonstrated to result in abortion or parturition induction when administered at sufficiently high doses to cattle. If pregnant the unlikely possibility of uterine rupture should be borne in mind, especially if cervical dilation does not occur. Animals should not be treated if they suffer from either acute or sub-acute disorders of the vascular system, gastro-intestinal tract or respiratory system. Do not administer by intravenous route. Noroprost is ineffective when administered prior to day five after ovulation. As with the use of all parenteral products, it is imperative that careful aseptic techniques should be employed to decrease the possibility of post injection bacterial infections. *Side-Effects, Cattle:* Side-effects are infrequently observed and are of a transitory nature as the compound is rapidly metabolised in the tissues. In cattle, salivation, tremor, restlessness and mild diarrhoea can occur for 15 - 30 minutes. The side-effects disappear within one hour after the administration of
Pharmaceutical Precautions:	Do not store above 25C. Protect from light. Keep out of the reach of children. Following withdrawal of the first dose, use the product within 21 days.
Legal Category:	POM-V
Packaging Quantities:	Noroprost is supplied in 10 ml and 30 ml vials.
Manufacturer Ident:	Norbrook Laboratories Ltd FOR ANIMAL TREATMENT ONLY
Version Info:	Vm 02000/4110
Further Info:	Success of reproduction management depends on many factors. Such factors are of importance when Noroprost is employed to regulate the time of breeding. These factors include: 1. A corpus luteum of about five days or more of age must be present in the ovary in order for Noroprost to be luteolytic i.e. cattle must be healthy and undergoing normal oestrus cycles. 2. If timed A.I. is not employed oestrus must be detected accurately. 3. Semen of high fertility must be inseminated. 4. Semen must be inseminated properly. 5. Physical facilities must be adequate to allow cattle handling without being detrimental to the animal. 6. Nutritional status must be adequate prior to and during the breeding season as this has a direct effect on conception and the initiation of oestrus in heifers or return of oestrus cycles in cows following calving.
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