

Pricing Embryo Transfer Services

Jenks S. Britt, D.V.M.
Russellville, KY 42276

Embryo transfer provides the livestock producer a method to: 1. increase the sale of breeding stock from superior animals; 2. produce offspring from donors unable to maintain pregnancy; 3. produce sibs or identical twins (embryo splitting) for research; 4. eradicate disease as pseudorabies or brucellosis; 5. produce embryos for export and increase numbers of offspring from limited numbers of donor dams (as exotic cattle and zoo animals). Embryo transfer at present cost is not an economical method to increase milk production or increase pounds of beef produced from E.T. offspring.

Embryo transfer is a medical service that veterinarians can provide their clients and can be an important part of a progressive practice.

Pricing Considerations Include:

1. Cost and Profit Potential for Practice
 2. Non-DVM E.T. Services
 3. Price of E.T. Offspring
- Not all donor cows are high dollar cows

What Can A Client Pay For E.T. Services

Flush 4 cows 1 day - Use on farm recipients
4 cows = 5.5 Embryos/cow x 65% Preg Rate = 14 Pregs
10% Abortion/Dystocia/Death loss = 1.4
Live Calves 12.6
Heifers 6.3 @ \$600.00 = \$3,780.00
Bulls 6.3 @ \$50.00 = 315.00
Value of E.T. Calves = \$4,095.00 = \$325.00/calf

Flush Fees (Example Fee Schedule)

5 hrs. Flush Time @ \$80.00/hr.	= \$ 400.00
PGF/GNRH Cost	105.00
FSH/Flush Kit 4 Cows	400.00
\$100.00 Per Pregnancy-Preg Fee	<u>1,400.00</u>
	\$2,305.00

Maximum Fee that allows a 40% profit margin above E.T. cost for the Dairyman is about \$165.00 total E.T. cost per pregnancy.

E.T. Fees should be in relation with other veterinary fees for similar complex procedures.

Miscellaneous Practice Tips

Keith E. Sterner, D.V.M.
2650 Ernest Rd.
Ionia, Michigan 48846

Use of a Miner's Light

The wheat light of the type used by coal miners and coon hunters offers several advantages over the conventional headlight that can be purchased from sporting goods stores. First, it produces a much brighter beam than conventional lights. It can be focused so that no matter what focal length your subject is, it is possible to have a light that does not have a "dead" spot in the middle. The battery is rechargeable hundreds of times so that it is rare to have a weak beam due to a low battery. Additionally, the lead-acid battery will provide up to 12 hours of continuous light, even in sub-zero temperatures. I have used this particular light for about two years now and use it for any situation which requires good illumination such as foot examinations, teat lacerations, dehorning, abdominal surgeries, especially at night when the farm lighting situations tend to be poor at best. Despite the relatively high cost of such a light, I can recommend it without hesitation due to its long life, excellent durability, and superlative illumination. Additionally, there have been a

number of times that the hard hat to which it is affixed has saved a severe blow to the head. Perhaps the single feature which distinguishes this particular device is the mounting bracket which allows the wearer to direct the beam into any fixed position desired.

A Quick Source of Emergency Oxygen

We have all been confronted with dystocia situations in which we have delivered a calf with a heartbeat only to have it die due to the inability to inflate the lungs and get it to breathe. Many of us do not carry a source of positive pressure ventilation with us, however most farms do have a shop in which can be found oxy-acetylene torches. By simply turning on the oxygen tank only and adjusting the regulator to between 5 and 10 lbs. of pressure, and then inserting the welding or cutting tip into the calf's nostril one can keep enough oxygen perfusion going to the lungs to keep the

animal from asphyxiation. The use of other respiratory stimulants may help as well. If you live in an endemic Bangs area, this method of ventilation could serve you well in avoiding not only this zoonosis, but others as well by avoiding the temptation to give mouth to mouth resuscitation.

Activated Charcoal for Grain Overload and Other Toxicities

In the past year, there has been an activated charcoal compound, SUPERCHAR (tm) introduced in the veterinary market. I have had the opportunity to use it in approximately four grain overload cases which had progressed to the point of

Donald B. Hudson, D.V.M.
North Platte, NE 69101

Suturing the vulva following replacement of vaginal prolapse.

Following an epidural, the prolapse is replace. The Buhner needle (the eye is in the point of the needle) and nylon umbilical tape or nylon parachute cord is used to suture the vulva. The needle is inserted through the skin, on the midline just ventral to the vulva as the skin reflects onto the perineum. The needle is inserted dorsally subcutaneously just lateral to the vulva externalizing the needle 1" dorsal to the dorsal commissure of the vulva. The nylon umbilical tape is threaded into the needle and retracted ventrally. The same procedure is repeated on the opposite side with the remaining nylon umbilical tape. The suture is pulled snugly and tied. This in effect is a purse-string suture. The big advantage is the nylon suture can be left in through the entire grazing and/or feeding period causing very little tissue reaction, swelling and postsuturing straining. An alcohol epidural is not needed unless the vagina is very necrotic.

A good dehorning saw.

Buy a good miter box saw, take it to a saw sharpening service, have then file out every other tooth and double the amount of set. This makes a hungry saw that doesn't bind in hair and skin.

the animal being recumbent. In the past, my experience with these animals was invariably the same they all died. Since starting to use this product, I have seen three of the four animals treated recover. While it is impossible to say whether or not these particular animals would have lived with some other treatment, it is my clinical impression and experience that they all would have died. It appears that this product, despite its relatively high expense is remarkably effective in treating this particular type of intoxication. An excellent article on the indications and guidelines for this product can be found in the January 1986 issue of *Veterinary Medicine* pp 73-77.

A pregnancy examination tip.

Reduce the stress on your arm and body when doing pregnancy examination in a chute. Tie an old car tire on the side of the chute opposite the hand that you examine with (left-hand—tie tire on right side of chute). The tire should be hip high and the posterior border flush with the rear end of the cow. This restrains the cow's rear end to your side of the chute with little or no squeeze on the chute. It will increase your speed and decrease the pain for us older, arthritic veterinarians.

Tips for the practice pickup.

Clipboard for dash of pickup. Buy an 8"x11" masonite clipboard and cut it down on a table saw to 5"x8". Attach a tapered 1" board to fit curvature of the dash. Attach the clipboard with 2 metal screws into holes drilled through clipboard and dash. Facilitates making notes to yourself on calls, tickets, things to get done and appointments.

A tool caddy can be purchased for behind the seat of the pickup made of heavy, leather-like plastic. This caddy is attached with metal screws to the back wall of the pickup, just under the window. It contains about 20 pockets of various sizes for flashlight, tools and equipment. Looks neat and makes things easy to find.

A rear window gun rack provides four good hooks to hang ropes, halters, twitches, etc.



Performance vs. Price.

The biggest difference between ESTRUMATE® (cloprostenol sodium) and its competitors isn't price. It's performance. In the field, ESTRUMATE has proven to be dependable and predictable — at a consistent 2 ml. (500 mcg.) dose.

So next time the choice is between performance and price, choose the one whose performance is worth the price. Choose ESTRUMATE.



Estrumate®
Performance worth the price.



Mobay Corporation
Animal Health Division
Shawnee, Kansas
66201, U.S.A.

Clearly a step ahead.

Estrumate®

(Cloprostenol Sodium)

Equivalent to 250 mcg. cloprostenol/ml.
Prostaglandin Analogue for Cattle

ESTRUMATE® (cloprostenol sodium) is a synthetic prostaglandin analogue structurally related to prostaglandin $F_{2\alpha}$ ($PF_{2\alpha}$). Each ml. of the colorless aqueous solution contains 263 mcg. of cloprostenol sodium (equivalent to 250 mcg. of cloprostenol) in a sodium citrate, anhydrous citric acid and sodium chloride buffer containing 0.1% w/v chlorocresol B.P. as a bactericide.

ACTION ESTRUMATE causes functional and morphological regression of the corpus luteum (luteolysis) in cattle. In normal, non-pregnant cycling animals this effect on the life span of the corpus luteum usually results in estrus two to five days after treatment. In animals with prolonged luteal function (mummified fetus and luteal cysts) the induced luteolysis usually results in resolution of the conditions associated with prolonged luteal function.

INDICATIONS For intramuscular use to induce luteolysis in beef and dairy cattle. The luteolytic action of ESTRUMATE can be utilized to manipulate the estrous cycle to better fit certain management practices, to terminate pregnancies resulting from mismatings and to treat certain conditions associated with prolonged luteal function.

RECOMMENDED USES **Unobserved or non-detected estrus** Cows which are not detected in estrus although ovarian cyclicity continues can be treated with ESTRUMATE if a mature corpus luteum is present. Estrus is expected to occur two to five days following injection, at which time animals may be inseminated. Treated cattle should be inseminated at the usual time following detection of estrus. If estrous detection is not desirable or possible, treated animals may be inseminated twice at about 72 and 96 hours post injection.

Mummified fetus Death of the conceptus during gestation may be followed by its degeneration and dehydration. Induction of luteolysis with ESTRUMATE usually results in expulsion of the mummified fetus from the uterus. (Manual assistance may be necessary to remove the fetus from the vagina.) Normal cyclical activity usually follows.

Luteal cysts A cow may be non-cyclic due to the presence of a luteal cyst (a single, anovulatory follicle with a thickened wall which is accompanied by no external signs and by no changes in palpable consistency of the uterus). Treatment with ESTRUMATE can restore normal ovarian activity by causing regression of the luteal cyst.

Pregnancies from mismating Unwanted pregnancies can be safely and efficiently terminated from one week after mating until about five months of gestation. The induced abortion is normally uncomplicated and the fetus and placenta are usually expelled about four to five days after the injection with the reproductive tract returning to normal soon after the abortion. The ability of ESTRUMATE to induce abortion decreases beyond the fifth month of gestation while the risk of dystocia and its consequences increases. ESTRUMATE has not been sufficiently tested under feedlot conditions, therefore, recommendations cannot be made for its use in heifers placed in feedlots.

Controlled Breeding The luteolytic action of ESTRUMATE can be utilized to schedule estrus and ovulation for an individual cycling animal or a group of animals. This allows control of the time at which cycling cows or heifers can be bred.

SAFETY AND TOXICITY Adverse reactions have not been seen at the recommended dose of 500 mcg. At 50 and 100 times the recommended dose, mild side effects may be detected in some cattle. These include increased uneasiness, slight frothing and milk let-down.

CONTRAINDICATIONS ESTRUMATE should not be administered to a pregnant animal whose calf is not to be aborted.

PRECAUTIONS There is no effect on fertility following the single or double dosage regimen when breeding occurs at induced estrus or at 72 and 96 hours post treatment. Conception rates may be lower than expected in those fixed time breeding programs which omit the second insemination (i.e. the insemination at or near 96 hours). This is especially true if a fixed time insemination is used following a single ESTRUMATE injection. As with all parenteral products, careful aseptic techniques should be employed to decrease the possibility of post injection bacterial infection. Antibiotic therapy should be employed at the first sign of infection.

DOSAGE AND ADMINISTRATION 2 ml. of ESTRUMATE (500 mcg. of cloprostenol) should be administered by INTRAMUSCULAR INJECTION for all indications in both beef and dairy cattle.

WARNINGS For veterinary use only.
Women of child-bearing age, asthmatics and persons with bronchial and other respiratory problems should exercise extreme caution when handling this product. In the early stages, women may be unaware of their pregnancies. ESTRUMATE is readily absorbed through the skin and may cause abortion and/or bronchospasms. Direct contact with the skin should therefore be avoided. Accidental spillage on the skin should be washed off immediately with soap and water.

STORAGE CONDITIONS
Protect from light. Store in container. Store at controlled room temperature (59°-86°F. (15°-30°C)).

HOW SUPPLIED 10 ml. and 20 ml. multidose vials.

CAUTION Federal (U.S.A.) law restricts this drug to use by or on the order of a licensed veterinarian.

Made in Great Britain by Imperial Chemical Industries PLC, owners of the trademark Estrumate.



Mobay Corporation
Animal Health Division
Shawnee, Kansas
66201, U.S.A.

Clearly a step ahead.

Protection of cattle against heartwater in Botswana: Comparative efficacy of different methods against natural and blood-derived challenges

B. C. Simpson, M. S. Lindsay, J. R. Morris, F. S. Muirhead, A. Pollock, S. G. Prichard, H. G. Stanley, G. R. Thirlwell, A. G. Hunter, J. Bradley, R. S. Windsor

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Five groups of Tswana-cross castrated male cattle between 20 and 30 months of age (a total of 158 animals) were transported from a ranch in a heartwater-free area of south Botswana to a feedlot near Gaborone in the east of Botswana where heartwater is endemic. On arrival, one group was vaccinated intravenously with the Onderstepoort sheep blood heartwater vaccine, one group was vaccinated intravenously with the new Onderstepoort tick-derived heartwater vaccine and a third group was vaccinated subcutaneously with this tick-derived vaccine. Vaccine reactions were blocked with long acting oxytetracycline on the first day of fever. A fourth group had a series of injections of long acting oxytetracycline on days 0, 7, 14 and 21 after arrival, and a fifth served as untreated controls. The animals remained at the feedlot for 65 days during which time they faced a low level of challenge by *Amblyomma hebraeum* ticks. None contracted heartwater and so they were then challenged, together with a further group of control cattle, with a dose of the sheep blood vaccine. Some animals in all groups had severe heartwater reactions and died despite therapy, but 76.7 per cent, 64.5 per cent and 74.3 per cent of the cattle in the blood vaccine, intravenous tick vaccine and long acting oxytetracycline groups respectively were resistant to challenge, compared with 48.3 per cent of the subcutaneous tick vaccine group and 36.4 per cent of the controls. It was concluded that intravenous vaccination of susceptible adult cattle with either the blood or the tick-derived vaccine needs careful monitoring in the month after vaccination and does not necessarily result in immune animals. No significant difference was demonstrated between the two vaccines in the degree of protection conferred. The results with long acting oxytetracycline suggested either that low levels of oxytetracycline persisted for extended periods of time or that the drug in this formulation induced a non-specific immunostimulant effect.