

	Drug	Concentration	Dosage-1100lb/ 500kg cattle	Contraindications	Withdrawal time
Local Anesthetic	Lidocaine HCl	20mg/ml	For field blocking: maximum 200ml of lidocaine 2%  Nerve block, lidocaine -dosage -1mg/kg, conc-2%(20mg/ml), weight 500kg Volume = WT X Dosage/ conc = 25 ml TOXIC DOSE-250ml 400 x 1/2 -It is suitable for performing surgery on standing animals, accordingly injuries associating casting and prolonged recumbency can be avoided	Lidocaine HCl is contraindicated in patients with a known history of hypersensitivity to local anesthetics of the amide type.	Meat: 28 days
Sedative	Xylazine	20 mg/ml	xylazine(IM)- Dosage- 0.05mg/Kg, conc-20mg/ml Weight-500kg Volume= Dose WT * Dosage/conc = 1.25 ml	Should not be used in <ul style="list-style-type: none"> <li>Renal or hepatic failure</li> </ul>	Withdrawal period: Meat: 5 days For milk: 4 days
Analgesic/ NSAIDs	Banamine (Flunixin meglumine )	50mg/ml	Flunixin(IV) - Dosage - 1.1mg/kg ,conc- 50mg/ml , Weight-500kg Volume = WT X Dosage/conc= 11ml	Should not be used <ul style="list-style-type: none"> <li>in animals that have shown prior hypersensitivity reactions.</li> <li>the IM route; should only be used when the IV route is not feasible <ul style="list-style-type: none"> <li>Do not use in horses</li> </ul> </li> </ul>	Withdrawal times: - For meat: Cattle: 14 days Swine: 24 days For milk- Cattle: 2 days
Antibiotic (Broad spectrum) long acting antipsychotic	Penstrep 400 (Procaine penicillin & Dihydrostreptomycin)	200,000 IU/ml	penstrep(IM)-dosage-20,000 mm/kg, conc -200,000mm,weight 500kg Volume = WT X Dosage/conc= 50 ml  NB: more than 5ml should not be administered at a singular site in calves. 20ml	Should not be used in <ul style="list-style-type: none"> <li>Animals hypersensitive to penicillins, procaine and/or aminoglycosides</li> <li>Animals with impaired renal function</li> <li>Concurrent administration of tetracyclines chloramphenicol, macrolides</li> </ul>	Withdrawal times: -For kidneys: 45 days. - For meat-21-30days - For milk 3-5 days.

			was given per site in gluteal muscle.	and lincosamides.	
General anesthetic	Ketamine	100mg/ml	ketamine(IV)- dose=1.0mg/kg Weight=500kg Conc=100mg/ml (1.0mg/kg)(500kg)/100mg/ml =5ml	Should not be administered with lungworm medication. For parenteral administration in dogs, cats, horses, cattle, goats and swine	withdrawal period: Meat: 16 days Otherwise: 0days
Intra-op fluids (can be administered if fluid loss is extreme/emergent)	0.9%Saline (use 1L bag)	0.9% at 250ml	Calculated of Drip Rate in drops per sec - (ml/min x drip factor)/60 = drops/sec $250 \times 20 = 83 / 60 = 1.4 = 3$ drops/2sec 60	crystalloid that is normal saline which is used in the management and treatment of dehydration (e.g., hypovolemia, shock), metabolic alkalosis in the presence of fluid loss, and mild sodium depletion through bodily fluid such as blood	Withdrawal period: 0days
Tolazoline(xylazine reversal)(for emergency use)(2-4x xylazine dose)	100mg/ml	4 X xylazine dose IV Eg. 0.1mg/kg	$V = (0.1 \times 500) / 100 = 0.5\text{mls}$	Reversal of xylazine should not be attempted until sufficient time has elapsed to allow the ketamine anesthesia if used to be resolved (15–20 minutes post-IV administration).	Withdrawal period Meat:8 days Milk: 48 hours
Atropine(emergency use)	0.54 mg/ml	0.04 mg/kg	$V = (0.04 \text{ mg/kg})(500\text{kg}) / 0.54$ mg/ml $V = 37.03 \text{ ml} (= 2\text{mg}/500\text{kg})$	Use if bradycardia <30bpm	withdrawal period: Meat: 14 days Milk:3 days
Epinephrine(emergency use)	1mg/kg (1:1000)	0.02mg/kg	$V = (0.02 \text{ mg/kg})(500 \text{ kg}) / 1$ mg/ml $V= 10 \text{ ml}$	anaphylactic rxns Do not use on extremities it'll block blood supply and cause sloughing	No withdrawal period
Neuroleptanalgesia	Hypnorm-Fentanyl/fluanisone	0.135 mg fentanyl/mL; 10 mg fluanisone/ml	1mg/kg IM $V=[(500)(1)]/(10)$ =50mls fluanisone	-	withdrawal period - meat 4 days - Milk 1-6days
Reversal neuroleptanalgesia (Naloxone;0.01 mg/kg)	Diazepam	5 mg/ml	0.4 mg/kg IV $V=[(500)(0.4)]/(5)$ =40mls	-	withdrawal period - meat 2+ days - Milk 3

(Emergency)					days
tetanus anti-toxin Behring	1mg/kg	10-50,000units (cattle) 3000-15000units for small ruminants	$(500)(1)/(50,000)$ =0.01 ml	<ul style="list-style-type: none"> <li>- For use as an aid in the prevention and treatment of tetanus in cattle, swine, sheep and goats. Recommended whenever a non-immunized animal, or one whose status is unknown, suffers a deep penetrating wound that has or may become contaminated with soil. Provides quick, short-term protection. Also ideal following castration and docking.</li> <li>- Anaphylactoid reactions may occur. Antidote : Epinephrine.</li> </ul>	withdrawal period <ul style="list-style-type: none"> <li>- meat and milk 21 days</li> </ul>
Ivermectin	0.08% orally and 1% injectable	200µg/kg	oral conc-0.8mg/ml $WT \times Dosage / conc$ $= (500)(0.8)/200$ $= 2mg/mg$ Injectable conc-10mg/ml $WT \times Dosage / conc$ $= (500)(10)/200$ $= 25mg/kg$	<ul style="list-style-type: none"> <li>- Oral Ivermectin is 0.08% and 1% for the injectable formulation, both can be used as Anti-myiasis/anti-parasitic</li> </ul>	withdrawal period <ul style="list-style-type: none"> <li>- meat 25 days</li> <li>- Milk approx 16 days</li> </ul>

What does chemical destruction of the teat involve-

- 100 cc of (10% formalin diluted in 500 cc of saline)
- Or 100 cc of 3% silver nitrate solution
- 250 ml of acriflavine (1ml in 500 ml of NSS)
- 20 ml of 5% Copper sulfate
- 60 ml of chlorhexidine
- Pre-treat with Megludyne

Ketamine + Xylazine for breakthrough = half sedation dose (0.13ml xylazine + ketamine 0.5ml) PRN /2

Rate of Fluid delivery = 5

Drop factor = 20 drops/ml

Atipamazole or yohimbine are more commonly used than tolazoline as a xylazine antagonist and can be used as xylazine reversal in cases of emergencies.

**Drug (mg) = [Infusion rate of the drug  
(mg/kg/hour) ÷ Fluid infusion rate  
(ml/kg/hour)] x diluent volume (ml)**

$$M = \frac{DV}{IR} \quad \& \quad V = \frac{M}{C}$$