SOME IMPORTANT DRUGS FOR FARM ANIMALS

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ANTIBIOTIC INJECTABLES

A) Pencillins

Class: Bactericidal

Mechanism: Cell wall inhibition

Indications: infections caused by any Gram Positive Bacteria and penicillin sensitive organism: Skin Infections, Bacterial pneumonia, URT, Strangles, Blackleg and Urinary tract infections (at higher Doses).

Synergism: Aminoglycosides

Antagonists: Tetracyclines, Chloramphenicol and Paromomycin.

Notes: It can cause Allergy, vomiting, diarrhea (or Enteritis if administered orally). Adrenaline must be used atonce if severe respiratory distress is there.

Narrow Spectrum Pencillins

1. Procaine Penicillin + Benzyl Penicillin

Trade name	Composition	Packing	Company	Recommended Dose
Penicon	30 lac + 10 lac	10 ml	Vetcon Ph.	LA=1ml/50kg
				SA=1ml/25kg
Nawapen	30 lac + 10 lac	10ml	Nawan	Same as above
Penicill – 40	$30 \operatorname{lac} + 10 \operatorname{lac}$	25ml	<u>Star</u>	Same as above

2. Procaine Penicillin + Dihydro-streptomycin sulphate

Trade name	Composition	Packing	Company
Penstrep	200mg + 250mg	50,100ml	Nawan

3. Penicillin G + Penicillin G Procaine + Dihydro-streptomycin Sulphate

Trade name	Composition	Packing	Company	Recommended Dose
Penivet Forte	10 lac+ 30 lac + 5gm	50ml	Star	7.5ml/ 100kg

4. Procaine penicillin + Benzyl penicillin + Streptomycin

Trade name	Composition	Packing	Company	Recommended Dose
Polybiotic	15 lac + 5 lac/5 g	5 gm	PDH	SA=1gm/animal
				LA=5gm/animal
Penbiotic	15 lac+ 5 lac /5 gm	5 gm	Nawan	Same as above
Biocin	15 lac+ 5 lac /5 gm	5 gm	Vetcon	Same as above
Penevit	15 lac+ 5 lac /5 gm	5 gm	Star	Same as above
Cipicon	15 lac+ 5 lac /5 gm	5 gm	China	Same as above
Synbiotic	15 lac+ 5 lac	1 gm	China	Same as above

5. Amoxicillin

Broad Spectrum Pencillins

Indications: Good Results in GIT and Skin diseases.

Antagonist: Tetracyclines, Chloramphenicol, Erythromycin, and Cephaloridine.

Notes: From GI tract absorbed better than ampicillin

Horses: 11-22mg/kg IM Bid		Ruminants: 11-22mg/kg IM Bid	
Trade name	Composition	Packing	Company
Clamoxyl LA 15%	150 mg/ml	50 & 100 ml	Pfizer
Farmox LA	150 mg/ml	50 & 100 ml	Farvet
Amoxivet	150 mg/ml	50 & 100 ml	ICI

Created by : Furqan Awan

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Novamox LA	150 mg/ml	50 & 100 ml	Selmore PH
Amoxy LA	150 mg/ml	50 ml	Selmore AG
Amovet LA	150 mg/ml	50 ml	Nawan
Betamox LA	150 mg/ml	50, 100 ml	Nawan
Getmox LA	150 mg/ml	50 & 100 ml	Zaidis Int.
Amoxikak LA	150 mg/ml	50 & 100 ml	Kakasian
Vetymoxyl LA	200 mg/ml	50 & 100 ml	Leads
Almox LA	150 mg/ml	50 & 100 ml	Star

6. Ampicillin Trihydrate

Horses: 11-22mg/kg IM Bid

Ruminants: 11-22mg/kg IM Bid

Trade name	Composition	Packing	Company
Ampicillin – 20%	200 mg/ml	100ml	NB sons
Ampikel	200 mg/ml	100ml	Well Ph.
Brosicol	200mg/ml	10,50ml	Star

Pencillinase Protected Broad Spectrum Penicillin

7. Amoxicillin + Colistin

Trade name	Composition	Packing	Company	Recommended Dose
Amoxycol – 10%	100 mg + 250,000 IU/ml	100 ml	Franklin UK	1 ml/10 kg
Colimoxin	100 mg + 250,000 IU/ml	50 & 100 ml	Selmore PH	Same as above
Colimox	100 mg + 250,000 IU/ml	50 & 100 ml	Nawan	Same as above
Amoxycon	100 mg + 250,000 IU/ml	100 ml	Kepro	Same as above

B) Macrolide (Tylosin, Erythromycin, Tilmicosin)

Class: Bacteriostatic, Narrow Spectrum

Mechanism: Binding to the 50S ribosomal RNA and inhibit translocation of the peptidyl tRNA **Indications:** URT infections, mastitis, metritis, and foot rot caused by microorganism susceptible to macrolides. **Side effects:** Include diarrhea, vomiting and anorexia in small animals after oral administration. IM injection is painful.

Notes: Can't be used In Horses because it can cause fatal diarrhea.

1) Tylosin:

Ruminants: 10-20mg/kg (Avg. 15mg/kg All Macrolides)

Trade name	Composition	Packing	Company
Fartylo	200 mg/ml	100 ml	Farvet
Tylosel	200 mg/ml	50,100ml	Selmore PH
Tylo – 20%	200 mg/ml	10, 50 & 100 ml	Ziadis Int.
Tylosin – 20%	200 mg/ml	50,100ml	Grace
Biotylo	200 mg/ml	100 ml	Biogain
Tylosan	200 mg/ml	50 & 100 ml	Sana
Tylomac – 20%	200 mg/ml	50,100ml	Star

C) Cephalosporins

Class: Bactericidal, Differ in Generations
Mechanism: Cell wall inhibition
Indications: Very effective for respiratory diseases, Skin diseases and most of bacteria including beta-lactamase producing strains. Also used in Urinary Tract infections, Soft tissues and Bones.
Antagonists: Gentamycin
Precaution: Doses should be reduced in liver affected animals. Poorly absorbed from GIT.
N6tes: First generation has strongest response against G+ve Cocci, Proteus, E.coli, Klebsiella than other generations. While 3rd Generation has good response against G-ve Bacilli.

<u>First Generation</u> Narrow Spectrum only for G+ve

1. Cephradine: Horses:

Ruminants:

Trade name	Composition	Packing	Company
Velosef	250mg/500mg/1gm:	5ml,10ml	Bristol M.S.
Vericef susp.	250mg/500mg/1gm:	60ml,100ml	Indus

2. Cephalexin

Horses: 10-30 mg/kg, PO, TID- QID

Ruminants: 7mg/kg IM Sid

Trade name	Composition	Packing	Company
Ceporex inj	250mg/500mg	5ml, 10ml	Indus
Keflex syp.	25 mg/ ml, 50mg/ ml	60ml	Eli Lilly

Third generation

Broad Spectrum both for G+ve and G-ve

1. Ceftiofur Hydochloride

Side effects: Usually safe to use in animals. However allergic reaction can occur. Rare bleeding disorders have been reported from cephalosporins.

Horses: 2.2-5 mg/kg IV IM

Ruminants: 1.1-2.2 mg/kg IM IV

Trade name	Composition	Packing	Company
Excenel RTU	50 mg/ml	100 ml	Pfizer
Cefur RTU	50 mg/ml	10, 50 & 100 ml	Nawan

2. Cefotaxime Sodium

Antagonists: Gentamycin

Side effects: Usually safe to use in animals. But allergic reactions, vomiting and diarrhea may occur in some animals. Horses: 20-30 mg/kg IV Ruminants:

Trade name	Composition	Packing	Company
Excef	250mg, 500mg,1gm	5ml, 10ml	Indus
Ceforin	250mg,500mg,1gm	10ml, 5ml	Nawan labs

3.Ceftriaxone Sodium

Horses: 25-50mg/kg IM

Ruminants:

Trade name	Composition	Packing	Company
Oxidil	250mg,500mg,1gm	5ml,10ml	Sami
Maxaf	250mg,500mg,1gm	5ml,10ml	Indus

D) <u>Aminoglycosides</u> (Gentamicin, Kanamicin, Amikacin, Streptomycin, Neomycin)

Class: Bacteriocidal, Broad Spectrum

Mechansim: Irreversibly bind to the 30S ribosome

Indications: Infections caused by susceptible pathogens, pneuomonias, urinary tract infections, endometritis, and septicemias that are resistant to other antibiotics.

Antagonists: Amphotericin B, Cephalosporins produce nephrotoxicity.

Side effects: Intestinal flora may be disrupted, diarrhea may occur. Other includes intramuscular blockage (when used with anaesthetic agents), nephrotoxicity and ototoxicity (oto=ear)

Notes: These are used in all species.

1. Gentamycin

Horses: 3-6mg/kg BID IM

Ruminants: 3-6mg/kg BID IM

Trade name	Composition	Packing	Company
Genton	100 mg/ml	50 & 100 ml	ICI
Gentasel – 10	100 mg/ml	50 & 100 ml	Selmore PH
Medi G 10	100 mg/ml	50 & 100 ml	Medivet
Gentasal 100	100 mg/ml	50 & 100 ml	Atzan
Gentafar	100 mg/ml	50 & 100 ml	Farvet
Gentawan - 10	100 mg/ml	100ml	Nawan
Gentalin – 10	100 mg/ml	50,100ml	Star
Gentasal - 50	50 mg/ml	100 ml	Atzan

2. Gentamycin + Trimethoprim + Sulfonamide

Trade name	Composition	Packing	Company	Recommended Dose
Genta plus	30+125+25	50,100ml	Leads Ph.	First Dose=30ml/50kg
	mg/ml			2nd Dose=15ml/50kg

3. Tylosin + Gentamycin

Trade name	Composition	Packing	Company	Recommended Dose
Tylogent	100 + 50 mg/ml	50, 100ml	Eterna	LA=1ml/30kg
	_			SA=1ml/20kg

4. Kanamycin

Notes: More good effects in Dogs & cats. Excessive dose can effect in 8th Cranial Nerve.Horses: 12-15mg/kg IMRuminants: 12-15 mg/kg IM

Trade name	Composition	Packing	Company
Kanasym	100 mg/ml	50,100ml	Symans
Kanacon	100 mg/ml	50,100ml	Vetcon Ph.
Kana Kak	100 mg/ml	50 ml	Trust Pharma
Kanamycin	100mg/ml	10, 50ml	China
Kanachron	100 mg/ml	10 & 50 ml	Star

5. Kanmycine + Ampicillin + Prednisolone + Chlorpheniramine

Trade name	Composition	Packing	Company	Recommended Dose
Kapcine	100mg+200mg+10mg+4mg	50, 100ml	Leads Ph.	LA=1ml/20kg
				SA=1ml/10kg

E) Tetracyclines (Oxytetracycline, Doxycycline)

Class: Bacteriostatic, Broad Spectrum

Mechanism: Reversibly bind to the 30S ribosome

Indications: Infections caused by tetracycline-sensitive strains; anaplasmosis, often ineffective for endocarditis, empyema, meningitis, septic arthritis and osteomyelitis.

Antagonists: Antacids, milk, diuretics, methoxyflurane, penicillins, ferrous sulfate.

Side effects: Causes nephrotoxicity when administered at high Recommended Doses, Calcium Chelation is the major side effect. Can affect growing bone and teeth formation (cause straining of teeth) in young animals and some hepatotoxicity may occur at large doses.

Notes: Mutiple doses should not be given to horses INTRAVENOUSLY. Doxycycline is mostly used in Dogs for Babesiosis.

1. Oxytetracycline (Simple)

Horses: 5mg/Kg IV

Ruminants: 5-10mg/kg IM or IV

Foals/Calf= 10-20mg/kg P.O.

Trade name	Composition	Packing	Company
Remoxin	50 mg/ml	50 & 100 ml	PDH
Oxy S	50 mg/ml	50 ml	Selmore PH
Nawacin 50	50 mg/ml	50 & 100 ml	Nawan
Oxycon – 50	50 mg/ml	50 ml	Vetcon Ph.
Resomycin	50mg/ml	50ml	Star

2. Oxytetracycline LA

Trade name	Composition	Packing	Company	Recommended Dose
Oxtra LA	200 mg/ml	50 & 100 ml	Fatro	1 ml/10 kg
Oxy LA	200 mg/ml	50 & 100 ml	Selmore PH	Same as above
Floxitetra LA	200 mg/ml	100 ml	Selmore AG	Same as above
Nawacin LA	200 mg/ml	50 & 100 ml	Nawan	Same as above
Remacycline LA	200 mg/ml	100 ml	Marush	Same as above
Rasomycine LA	200 mg/ml	50 ml	Star	Same as above

3. Oxytetracycline PVD (Poly venyl Pyrolidone)

Trade name	Composition	Packing	Company	Recommended Dose
Oxycare PVP	100 mg/ml	50 ml	Vetycare	1 ml/20 kg
Nawacin PVP	100 mg/ml	50 & 100 ml	Nawan	1 ml/20 kg
Oxy PVP	100 mg/ml	50 & 100 ml	Selmore PH	1 ml/20 kg
Resomycine PVP	100 mg/ml	50 ml	Star	1 ml/20 kg

F) AMPHENICOLS (Chloramphenicol, Florfenicol)

Class: Bacteriostatic, Broad Spectrum

Mechanism: Bind to the 50S ribosome

Indications: Upper respiratory tract infections, urinary tract infections, enteritis, and bacterial conjunctivitis. **Side effects:** Cause multiple genetic effects i.e. Aplastic anaemia, Bone marrow dysfunction, blood dyscrasias (imbalance of four body fluids i.e. blood, bile, lymph and phlegm).

Notes: Amphenicol are very stable and should not be used in food-producing animals because residues remain secreted upto 28 days in meat, milk or eggs. They are getting banned for producing genetic effects.

1. Chloramphenicol

Horses: 50mg/kg IV for 4 hrs

Ruminants: Don't used in food produing animals

Trade name	Composition	Packing	Company	Recommended Dose
Chlorocare	20 mg/ml	50 ml	Vetycare	Ls=25 ml
				Ms = 10 ml
				Ss= 3 ml
Rexaphenicol	20 mg/ml	50 ml	SJ & G	Same as above
Chloramphenicol 20	20 mg/ml	100 ml	Bremer	Same as above
Chlorobiotic	20 mg/ml	50 ml	Star	Same as above

$\label{eq:constraint} \textbf{2. Oxytetracycline} + \textbf{Chloramphenicol} + \textbf{Prednisolone} + \textbf{Lidocaine}$

Notes: Antimicrobial as well as anti-inflammatory effect.

Trade name	Composition	Packing	Company	Recommended Dose
Chlorotatrason	5 g + 10 g + 500 mg	50 ml	Marial	1 ml/10 kg
	+ 1 g			
Oxyclore-P	5 g + 10 g + 500 mg	50 ml	Enterna	1 ml/10 kg
	+ 1 g			
Oxypenisol	5 g + 10 g + 500 mg	50 ml	Star	1 ml/10 kg
	+ 1 g			

3. Florfenicol

Notes: Should not be used in calves and Heifers. Approved for P.hemolytica and P.multocida. Horses: Don't Used Ruminants: 20mg/kg IM repeated after 48 Hrs

Trade name	Composition	Packing	Company	Recommended Dose
Naflor	300 mg/ml	10 & 50 ml	Nawan	1 ml/15 kg
Florofen	300 mg/ml	50 ml	Leads	1 ml/15 kg

G) <u>SULPHONAMIDES:</u>

Class: Bacteriostatic, Broad Spectrum

Mechanism: These antimicrobials are analogues of para-aminobenzoic acid and competitively inhibit formation of dihydropteric acid.

Indications: Acute urinary tract infections, respiratory tract infections, wound infections, coccidiosis and foot rot. **Side Effects:** Causes urticaria and crystal formation in renal tract.

Notes: Should not be used IM as they can cause sloughings. Most simple sulfonamides are mostly used in Ruminants and not in others spp. due to irritation.

1. Sulfadimidine Sodium (Sulfamethazine)

Class: Sulfonamides

Ruminants: 50-220mg/kg P.O. or IV (Initial dose ,subsequent doses should be half)

Trade name	Composition	Packing	Company
Sulfadine	33.3%	100 ml	PDH
Dimadin	33.3%	100 & 400 ml	Nawan
Demicon	33.3 %	100 & 500 ml	Vetcon
Sulfadox	33.3%	100 & 500 ml	Zaidis Int.
Sandine	33.3%	50,100ml	Sanna labs
Sulfadimadine	33.3 % (333mg)	100 & 500 ml	Star

2. Tribrissen (Trimethoprim + Sulfadiazine)

Class: Potentiated Sulfonamides

Indications: Very effective as compared to simple sulfa drugs.

Notes: Sulfadiazine, alone, is used in all species at the rate of 50mg/kg.

Trade name	Composition	Packing	Company	Recommended Dose
Tribrissen	T=8% + S=40%	10 & 50 ml	GSK	1ml/15 kg
Tribactral Inj.	T=8% + S=40%	10 & 50 ml	Selmore PH	Same as Above
Tryton	T=8% + S=40%	10 & 50 ml	ICI	Same as Above
Triben	T=8% + S=40%	10 & 50 ml	Eterna	Same as Above
Sulprim	T=8% + S=40%	10 & 50 ml	Hilton	Same as Above
Trimodin – 48	T=8% + S=40%	10,50, 100ml	Nawan	Same as Above
Trisolazine	T=8% + S=40%	10 & 50 ml	Star	Same as Above
Tribactral bolus	T=8% + S=40%	10 bolus/pack	Selmore PH	Same as Above
Trimodin Bolus	T= 200mg + S=	20 bolus	Nawan	Same as Above
	100mg			

4. Sulphamerazine + Sulphadiazine + Sulphathiazole + Trimethorpim

Trade name	Composition	Packing	Company
Trisulpha	100mg +60mg	10 & 50 ml	Selmore Ph.
	+40mg+40mg		

H) Fluoroquinolones

Class: Bactericidal, Narrow Spectrum (Gram Positive)

Mechanism: Bind to the 'A'''subunit of DNA gyrase (topoisomerase and prevent supercoiling of DNA, so inhibits DNA synthesis.

Indications: Bacterial skin and soft tissue infections, respiratory infection & cystitis.

Side effects: Causes the formation of lesions in the joint/articular cartilage during rapid growth phases of animals and decreased water consumption.

Notes: They are associated with CNS stimulation, and should be used with caution in patients with known or suspected CNS disorders. It is not mostly used in Dairy Cattle due to residual problem. Not used in horses because can cause potential cartilage abnormalities in young horses.

1. Enrofloxacin

Horses: Not used

Ruminants: 7.5-12.5 mg/kg Sid

Trade name	Composition	Packing	Company	Recommended Dose
Encure 20	200 mg/ml	30,100ml	Nawan	0.5 ml/40 kg
Enro 20%	200 mg/ml	10 & 50 ml	Zaidis Int.	0.5 ml/40 kg
Enroquin Forte	200 mg/ml	50 ml	Slining China	0.5 ml/40 kg
Encure 10	100 mg/ml	10, 50 & 100 ml	Nawan	1 ml/40 kg
Vety Enrox	100 mg/ml	50 & 100 ml	Vetycare	1 ml/40 kg
Bioflox	100 mg/ml	100 ml	Biorex	1 ml/40 kg
Enrotil	100 mg/ml	100 ml	Selmore AG	1 ml/40 kg
Ceriflox 10%	100mg	50, 100ml	Star	1ml/40 kg
Floxivet	50 mg/ml	50 & 100 ml	Medivet	2 ml/40 kg
Ceriflox 5%	50 mg	50, 100ml	Star	2 ml/40kg

2. Norfloxacin

Trade name	Composition	Packing	Company	Recommended Dose
Doctorgin – 10%	100 mg/ml	50 ml	Selmore AG	1 ml/10 kg
Norfloxaline	100 mg/ml	100 ml	Terobina Corp.	Same as Above
Norfloxin 10%	100mg	50,100ml	Star	Same as Above
Norflox 10%	100 mg/ml	50 & 100 ml	Trust Pharma	Same as Above
Norflox 5%	50 mg/ml	50 & 100 ml	Trust Pharma	2 ml/10 kg

3. Ciprofloxacin

Trade name	Composition	Packing	Company	Recommended Dose
Cipoxin	100 mg/ml	50 & 100 ml	Selmore PH	LA = 1 ml/20 kg
				SA = 1 ml/10 kg
Ciprocel	100 mg/ml	50 & 100 ml	Selmore AG	Same as Above
Ciprocon	100 mg/ml	50 & 100 ml	Vetcon	Same as Above
Ciprocine	100 mg/ml	50 & 100 ml	Terobina	Same as Above
			Corporation	

4. Flumequine

Notes: Very less use of this antibiotic and they are mostly against G-ve bacteria.

Trade name	Composition	Packing	Company	Recommended Dose
Flumequine bolus	350 mg/bolus	50 bolus/pack	Medivet	1 bolus /40kg

5.Colistine + Flumequine

Trade name	Composition	Packing	Company	Recommended Dose
Comec	20K IU+30	50 ml	Selmore PH	1 ml/5 kg
	mg/ml			
C-quine	20K IU+30 mg	100 ml	Medivet	1 ml/5 kg

Class: Bacteriostatic, Narrow Spectrum Mechanism: bind to 50S subunit of bacterial ribosomes Indications: Upper respiratory tract infections, and skin infections. Side effects: Occasional vomiting and diarrhea Notes: Lincomycin is not for use in birds like layers, breeders or turkeys. It is also don't used in Horses.

1. Lincomycin HCl

Ruminants: 10mg/kg IM BID

Trade name	Composition	Packing	Company
Lincomycin	300mg	2ml, 10ml	UpJohn

2. Spiromycin + Lincomycin

Trade name	Composition	Packing	Company	Recommended Dose
Spiraline	12.5 % + 7.5 %	100 ml	Medivet	1 ml/20 kg
Lincospira	12.5 % + 7.5 %	50ml	Selmore Ph.	Same as Above

3. Lincomysine + Spectinomycine:

Trade name	Composition	Packing	Company	Recommended Dose
Linco-Spectin	50mg+ 100mg	50, 100ml	Pfizer(Ghazi Bro)	LA=1ml/10kg
				Cf, SA=1ml/5kg
Lincoject- S	50mg+ 100mg	100ml	Grace Ph.	Same as Above
Lincotin	50mg+ 100mg	50, 100ml	Star	Same as Above



ANTIBIOTIC SPRAYS

1. Chloramphenicol + Cetramide + Dimethyl Phenthalate + Crystal Voilet + Isopropyl ALC + Dimethyl ether

Trade name	Composition	Packing	Company	Recommended Dose
Pink Spray	3 g + 0.6 g + 0.3 g + 60	100	Atzan	Spray twice a day
	ml + 40 ml	ml,250 ml		

2. Oxytetracyline

Trade name	Composition	Packing	Company	Recommended Dose
Teragin Spray	40 mg/gm	200 ml	Star	Spray twice a day
Oxycart Spray	750 mg/ml	150 ml, 300ml	Star	Spray twice a day

3. Chlortetracycline

Trade name	Composition	Packing	Company	Recommended Dose
CTC Spray	-	200 ml	Eurovet	Spray twice a day

4. Chloramphenicol + Nitrofurazone + Gentian Violet

Trade name	Composition	Packing	Company	Recommended Dose
Clonigent Spray	3.25 gm+ 0.15 gm + 0.15 gm	200 ml	Star	Spray twice a day

intra MAMMARY TUBES

1. Neomycine + Procaine penicillin + Novobiocin + Dihydrostreptomycin + Prednisolone

Trade name	Composition	Packing	Company	Recommended Dose
Tetra Delta	105 mg + 100,000	10 ml	Pfizer	1 syringe per 12 Hr
	IU+ 100 mg + 10			
	mg			

2. Cloxacillin Benzathine + Neomycin Sulphate + Prednisolone Acetate

Trade name	Composition	Packing	Company	Recommended Dose
Nawaject	300mg+200mg+10mg	4 gm syringe	Nawan	1 syringe per 12 Hr

3. Cephradine + Neomycin Sulphate + Prednisolone Acetate

Trade name	Composition	Packing	Company	Recommended Dose
Lactovet	300mg+200mg+5mg	4 gm syringe	Nawan	1 syringe per 12 Hr

4. Gentamycin

Trade name	Composition	Packing	Company	Recommended Dose
Gentamast	100 mg/7.5 gm	7.5 gm	Breemer	1 syringe per 12 Hr

5. Ampicillin + Cloxacillin

Trade name	Composition	Packing	Company	Recommended Dose
Ampiclox LC	75mg + 200mg /3gm	4.5ml syringe	Pfizer	1 syringe per 12 Hr

6. Gentamicin + Dexamethasone

Trade name	Composition	Packing	Company	Recommended Dose
Akamycin D	70mg + 2.5 mg	1Syringe (10gm)	Selmore	1 syringe per 12 Hr



• INTRAUTERINE PESSARIES

1. Sulfathiazol + Penicillin + Streptomycin + Ethinyloestradiol

Trade name	Composition	Packing	Company	Recommended Dose
Utavet	1750 mg + 100,000 IU+ 50 mg + 0.5 mg	20 tab/pack	Nawan	LA= 4- 8 bolus
Utinol	Same as above	20 tabs/pack	Star	LA = 4-8 bolus

2. Chlortetracycline HCl + Furazolidone+ Metronidazole

Trade name	Composition	Packing	Company	Recommended Dose
Utacare	1.0 gm + 0.500 gm	30's, 50's & 100's	Nawan	As recommended
	+1.0gm			

3. Chlortetracycline + Neomycin Sulphate

Trade name	Composition	Packing	Company	Recommended Dose
Chloracin	1.0 gm + 0.50 gm	20's	Nawan	As recommended

4. Oxytetracycline + Idochloroxyquinoline + Fluraltadone + Vit. E

Trade name	Composition	Packing	Company	Recommended Dose
Uterusfloor	500 mg + 100,000 IU	20 ml	Selmore AG	As recommended
	+50 mg + 0.5 mg			

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ANTIPYRETIC, ANALGESICS AND ANTI-INFLAMMATORY DRUGS

1. Methampyron + Aminopyrine + Caffeine + Chlorpheniramine

Indications: Causes Analgesia for mild to moderate pain, Antiinflammatory action and Antipyretic.

Trade Name	Composition	Packing	Company	Recommended Dose
Thampyron	100+10mg+1mg+10mg	50 ml	Atzan	Ls = 20 ml; $Ms = 10 ml$;
				Ss=5 ml
Strongpyrone	200+50+20+2mg	50 ml	Selmore AG	Same as Above
Metapyron	-	50 ml	Zaidis Int.	Same as Above
Pyrosel	200+50+20+2mg	50 ml	Selmore Ph	Same as Above

2. Phenylbutazone

Class: Pyrazolidine derivative

Indications: Used extensively in horses for treatment of lameness, and for relief of pain with colic. Actions: Causes Analgesia for mild to moderate pain, Anti-inflammatory action and Antipyretic. Side effects: Causes GIT ulcers and bone marrow suppression.

Notes: Should be given IV.

Horses: 2-4.4 mg/kg IV Sid, Bid

Ruminants: 4mg/kg IV Sid

Trade Name	Composition	Packing	Company
Butadin	2 gm/10 ml	10 & 100 ml	Star
Pain Go	Same	50, 100ml	Leads Ph.
Phenadine	Same	100ml	Biorex
Elkazolidine	Same	Same	Elko Org.

3. Diclofenic Sodium

Class: Heteroaryl acetic acids

Notes: Getting banned due to its residual problem and Vultures death issues.

Trade Name	Composition	Packing	Company
Dicloran	25mg/ml	3ml amp	Sami
Voren	25mg/ml	3ml amp	Continental
Voltral	25mg/ml	3ml amp	Novartis

4. Flunixin Meglumin

Class: Banamine derivative

Indications: Pain associated with musculo-skeletal disorders and colic. Other uses are endotoxic shock, calf diarrhea, heat stroke and opthalamic infections.

Side effects: In horses, include swelling at injection site, and sweating. Horses: 0.25-1 mg/kg IM Ruminants: 1.1-2.2 mg/kg IM

Trade Name	Composition	Packing	Company	Recommended Dose
Loxin	50 mg/ml	10 & 20 ml	Selmore PH	2 ml/45 kg
Fluen	50 mg/ml	10 &20 ml	Vetycare	2 ml/45 kg

5. Meloxicam

Class: Oxicam derivatives

Indication: Inflammatory muscular pain, fever, chronic musculo skeletal disorders & soft tissue injury. Also effective in pneumonia, bronchopneumonia, mastitis, prolapse of uterus and vagina. Horses: Not used

Ruminants: 0.5mg/kg IM

Trade Name	Composition	Packing	Company	Recommended Dose
Metrym	20 mg/ml	10, 20 & 50 ml	Nawan	1 ml/40 kg
Vetafenac plus	7.5 mg/ml	10 & 50 ml	SJ & G	Same as Above
Melacam	20mg	50, 100ml	Medivet	Same as Above
Diclostar	Same	50ml	Star	Same as Above

6. Ketoprofen

Class: Propoinic acid derivative. **Horses:** 2.2 mg/kg, IV, sid

Ruminants: 2.2 mg/kg, IV; 3 mg/kg, IM, sid

Trade Name	Composition	Packing	Company	Recommended Dose
Profenid	50mg;	2ml amp	Rhone-Poulenc	As recommended
			Rorer	
Ketoject	100mg	50ml	Selmore Ph.	As recommended

7. Metamizol Sodium

Class: Pyrazolidine derivative Indications: should be used in severe pain and fever. Notes: Reported to cause agranulocytosis Horses: 11-22mg/kg

Ruminants: 50mg/kg

Trade Name	Composition	Packing	Company	Recommended Dose
Dipyron	1gm/2ml	50,100ml	Symans	LA=3ml/100kg
				SA=1ml/40kg
Dipysym	500mg/2ml	50,100ml	Symans	Same as Above
Novalgin	500mg/2ml	5ml amp.	Hoechst	Same as Above

8. Oxytetracycline + Mepyramine + Phenylbutazone

Trade Name	Composition	Packing	Company	Recommended Dose
Phenoxy	50+25+25mg	20ml,50ml	Selmore Ph.	15ml/animal

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ANTIALLERGIC AND ANTIHISTAMINIC DRUGS

Class: H-1 blockers

Indications: Pruritis, urticaria, and angioedema with acute allergic reaction, anaphylactic shock and URT infaction. Side effects: Include drowsiness, weakness, dry mucous membrane, urinary retention and CNS stimulation on overdose. Notes: Antihistamines may act synergistically with NSAID, glucocorticoids, or fatty acid supplements

1. Mepyramine Maleate

Horses:1mg/kg slow IV,IM

Ruminants:0.5-1gm TD IM

Trade Name	Composition	Packing	Company	Recommended Dose
Mepran	50 mg/ml	10,50ml	Nawan	Ls=20 ml, Ms=8 ml
-				Ss=3 ml
Meprim	50 mg/ml	10 & 50 ml	SJ & G	Same as Above
Meprasym	50 mg/ml	10 & 50 ml	Symens	Same as Above
Meprason	50 mg/ml	10 & 30 ml	Star	Same as Above

2. Pheniramine Maleate

Horses:

Ruminants:

Trade Name	Composition	Packing	Company	Recommended Dose
Avil	22.7 mg/ml	3 ml	Aventis	0.5-1ml/10kg
Antivil	22.7 mg/ml	50 ml	Orient	Same as Above
Phenrasym	22.7 mg/ml	50 ml	Symens	Same as Above
Annvil	22.7 mg/ml	50 ml	Venus	Same as Above

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CORTICOSTEROIDS

Indications: Allergic reaction, inflammatory conditions of musculo skeletal system, shock, toxemia, laminitis, ocular inflammatory condition. Adverse side effects: Inhibit antibody formation, decrease the concentration of lymphocytes and eosinophils, suppress the migration of neutrophils, and inhibit phagocytosis.

Side Effect: Immuno-supperation, Ketosis, and many more but most are associated with chronic or discontinous use.

1. Prednisolone Acetate

Class: Intermediate acting (12-36 hrs) corticosteroids **Horses:** 0.2-4.4mg/kg

Ruminants: 1-4mg/kg

Trade Name	Composition	Packing	Company
Predivet	25 mg/ml	10 & 50 ml	Nawan
Prednicart	25 mg/ml	50 ml	SJ & G
Slon M	10 mg/ml	50 ml	Selmore
Komi-prednislone	10 mg/ml	50 ml	Atzan
Predsole	25mg	50,100ml	Star

2. Prednisolone + Dexamethasone

Trade Name	Composition	Packing	Company	Recommended Dose
Panacart	7.5 mg + 2.5	10, 30 & 50 ml	Selmore PH	Ls=10 ml, Ms=5ml
	mg/ml			Ss=2ml
Prednicart D	7.5 mg + 2.5	10 & 50 ml	SJ & G	Same as Above
	mg/ml			
Cartinol P	7.5 mg + 2.5	10 & 20 ml	Star	Same as Above
	mg/ml			

3. Isofluprednisolone Acetate

Horses: 0.02mg/kg IM

Ruminants: 5-20mg/kg IM; 5-20mg/kg Intra-synovial

Trade Name	Composition	Packing	Company
Predef 2X	2 mg/ml	100 ml	Pfizer
Abicorten	2 mg/ml	50 ml	Fatro

4. Dexamethasone

Class: Long acting (>48 hrs) corticosteroids **Horses:** 0.01-0.2mg/kg

Ruminants: 0.02-2mg/kg

Trade Name	Composition	Packing	Company
Decadron	4mg/ml	1 & 5 ml	MSD
Dexadron	2 mg/ml	1 & 50 ml	Venus
Dexaron	2 mg/ml	50 ml	IPL
Dexavet	2mg/ml	50ml	Star

5. Triamcenolone Acetate

Horses: 0.1-0.2mg/kg IM ; 6-18mg/kg Intra-synovial

Ruminants: 0.02-0.04 mg/kg IM ; 6-18 mg/kg Intra-synovial

Trade Name	Composition	Packing	Company
LonaCort	40mg/ml	1ml Amp	Zafa Ph.
Triton	40mg/ml	1ml Amp	Mass Pharma
Kenacort-a	40mg/ml	1ml amp	Bristol- myers
			squib

TRANQUILIZERS AND ANAESTHETICS

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1. Lignocain Hydrochloride

Class: Local Anaesthetic

Trade Name	Composition	Packing	Company	Recommended Dose
Xylocain	2%	10 ml	B & H	As recommended
Adecaine-adrenaline	2% + adrenaline	10 ml	PDH	As recommended

2. Xylazine Hydrochloride

Class: Tranquilizer, Alpha 2-agonist

Clinical use: include sedation, analgesia, short term anaesthesia, and induction of vomiting.

Antidote: Yohimbine, (Yobine) and Atipamezole (Antisedan)

Horses: 0.1-1 mg/kg, IV or 0.5-1.0 mg/kg, IM or SC

Ruminants: 0.05-0.1 mg/kg, IV or 0.1-0.2 mg/kg, IM

Trade Name	Composition	Packing	Company	Recommended Dose
Xylaz	23.32 mg/ml	25 ml	Farvet	LA=2.5-5 ml IV, or
				5-10 ml IM

3. Medetomidine

Class: Tranquilizer, Alpha 2-agonist

Clinical use: facilitating clinical examination, minor surgical procedure and minor dental procedure that do not require intubation.

Notes: Generally used for Dogs.

Trade Name	Composition	Packing	Company
Domitor	1 mg	10ml	Pfizer

4. Propofol

Class: Dialkylphenols(GABA-A recepters)

Notes: No analgesia thatswhy it is used with any opiod e.g. Fentanyl

Trade Name	Composition	Packing	Company	Recommended Dose
Propfol	10mg	20ml	Abott	As recommended
Diprivan	10mg	20ml	ICI	As recommended

5. Ketamine

Class: NMDA receptor antagonist **Horses:** 1.1mg/kg SD, IV

Ruminants: 2mg/kg SD, IV or 4mg/kg SD, IM

Trade Name	Composition	Packing	Company	Recommended Dose
Ketasol	50mg	10 ml	Indus	As recommended
Ketacil	50mg	10ml	Mediceena	As recommended
Ketalite	50mg	10ml	Elite Ph.	As recommended

6. Chloral Hydrate

Class: Aldehydes Horses: 60-200mg/kg SD, IV

Ruminants:

Trade Name	Composition	Packing	Company	Recommended Dose
Apnotek Inj	0.1mg	5ml	AngloPak	As recommended
Chloral Hydrate Pwd	100%	100gm	Symans	As recommended

ANTIPROTOZOAL DRUGS

1. Imidocarb Dipropionate

Clinical use: For treatment of Babesiosis and Anaplasmosis.

Side effects: May cause injection pain and mild cholinergic signs, such as salivation, nasal drip or vomiting. Other less common side effects are panting, restlessness, and diarrhea

Solution: Severe signs may be reversed with atropine sulfate.

Notes: Second Dose must be repeated after 48 Hrs

Horses: For Babesia:3mg/kg IM for 24Hrs

Ruminants: For Babesia: 1.2 mg/kg SC SD ; For Anaplasma: 3mg/kg SC ; For Prophylaxis: 3mg/kg SC

Trade Name	Composition	Packing	Company	Recommended Dose
Imizol	120 mg/ml	100 ml	ICI	C,S,G=1ml/100kg;
				H=1ml/50 kg
Imipro	120 mg/ml	10 & 100 ml	Selmore PH	Same as Above
Imido G	120 mg/ml	10 & 100 ml	Zaidis Int.	Same as Above
Imicarb	120 mg/ml	50 & 100 ml	Star	Same as Above

2. Diminazine Aceturate (also added Phenazone for decreasing body temp.):

Clinical use: For Trypanosomiasis (Good against T.congolense and T.vivax but not so much effective against T.brucei) Horses: 3-5mg/kg IM (But much toxic to Horses as compared to cattle) Ruminants: 3-5mg/kg IM

Trade Name	Composition	Packing	Company	Recommended Dose
Tryptowan	1.05 gm + 1.31gm	2.36gm +15 ml	Nawan	Babesia=1ml/40kg;
		H ₂ O		Trypanosoma=1ml/20kg
				Trichomonas =1ml/20kg
Dimirin	1.05 gm + 1.31gm	50 & 100 ml	Zaidi bros.	0.3ml / 10kg
Diminol (2.36gm)	1.05 gm + 1.31gm	Sachet	Star	As recommended
Diminol (9.44gm)	4.2gm + 5.24gm	Sachet	Star	As recommended

3. Diminazine Diaceturate

Clinical use: For treatment of Trypanosomiasis and Babesiosis. Notes: Second Dose must be repeated after 48 Hrs Horses: 3-5mg/kg IM Sid Ruminants

Ruminants: 3-5mg/kg IM Sid

Brand Name	Composition	Packing	Company	Recommended Dose
Fatribanal RTU	35 mg/ml	50 ml	Fatro	1 ml/20 kg
Fatribanal Sachet (14gm)	-	Single Dose	Fatro	15 ml Sol
Diminazin	35 mg/ml	50 ml	Star	1 ml/20 kg
Diminazine DS	70mg/ml	50, 100ml	Star	As recommended

4. Buparvaquine

Clinical use: For treatment of theileriasis.

Horses:

Ruminants: 2.5mg/kg IM Sid

Brand Name	Composition	Packing	Company	Recommended Dose
Butalax	50 mg	20ml	ICI	1 ml/20 kg
Parvon	50 mg	20ml	Selmore Ph.	Same as Above
Buparvalax	50 mg	50, 100ml	Star	Same as Above

5. Quinapyrimine Sulphate + Quinapyrimine Chloride

Notes: Drug of choice for T.brucei and less toxic to horses as compared to diminazine.

Brand Name	Composition	Packing	Company	Recommended Dose
Biquin	1.5gm+1gm	(2.5gm)20ml SD	Star	1 ml/20 kg



ANTHALMENTIC DRUGS

Anthalmentic Drugs consists of various groups:

1) **Benzimidazole**: It causes degeneration in intestinal cells by *binding to the tubulin*, thus *inhibiting polymerization* of cytoplasmic microtubules which leads *to impaired uptake of glucose*. e.g. Oxfendazole, Albendazole.

2) <u>Tetrahydropyrimidines / Imidazothiazoles:</u> It act as Autonomic Ganglionic Stimulant of PANS & SANS leading to *muscular paralysis*. e.g. Pyrantal, Morantal, Levamisole, Tetramisole.

3) Organophosphates (Trichlorfon, Coumaphos, Haloxan, Dichlorovos).

- 4) Avermectins: It biNds with GABA ligated Cl-channels leading to paralysis e.g. Ivermectin, Moxidectin, Dorammectin,.
- 5) Salicylanilides: It acts by uncoupling of Oxidative phosphorylation e.g. Oxyclozanide, Nitoxynil, Closantel.
- 6) **<u>Piperazine:</u>** They are GABA receptor agonists binds with Cl-channels leading to paralysis.

1. Oxfendazole

Class: Benzimidazole

Notes: Broad Spectrum(Nematods & Trematods). Non-teratogenic. More safety index Horses: 10mg/kg SD Ruminants: 2.5 mg/kg SD

Trade Name	Composition	Packing	Company	Recommended Dose
Systamax	22.65 mg/ml	100 & 450 ml	ICI	1 ml/8 kg
Oxafex	22.65 mg/ml	100, 450ml,1lit	GSK	Same as Above
Fendamax	22.65 mg/ml	100 & 450 ml	Trust Pharma	Same as Above
Topmax	22.65 mg/ml	100 ml & 1 liter	Zaidis Int.	Same as Above
Profax	22.65 mg/ml	100 & 450 ml	Hilton	Same as Above
Fenzol	22.65 mg/ml	100 ml & 1 liter	PDH	Same as Above
Nawamax	22.65mg/ml	500ml, 1lit	Nawan	Same as Above
Oxazole	22.65 mg/ml	100,500ml,1liter	Star	Same as Above

2. Oxyclozanide:

Class:Salicylanilides

Horses: Don't used in Horses

Notes: Broad Spectrum (For fasciola and other Nematods).

Ruminants:10-15mg/kg

Trade Name	Composition	Packing	Company	Recommended Dose
Zanil	3.4%	100,250ml,1 liter	ICI	LA=30ml/100 kg,
				SA=1ml/2kg
Oxanil	3.4%	100,250ml,1 liter	Eterna	Same as Above
Flukil	3.4%	100,500 ml, 11it	Symans	Same as Above
Zalvet	3.4%	100 ml,500ml	Star	Same as Above

3. Oxfendazole + Oxyclozanide:

Trade Name	Composition	Packing	Company	Recommended Dose
Oxanid	22.65 mg+ 62.5mg/ml	100 ml & 1 liter	GSK	LA=1 ml/5 kg,
				SA=1ml/4kg
Punch	22.65 mg+ 62.5mg/ml	100 & 500 ml	Selmore PH	Same as Above
Fenzed Plus	22.65 mg+ 62.5mg/ml	100 ml	Vetworld	Same as Above

4. Oxfendazole + Cobalt + Selenium:

Trade Name	Composition	Packing	Company	Recommended Dose
Oxfenda SC	22.65+3.82+0.35mg/ml	450 ml	ICI	1 ml/10 kg
Orazol SC	22.65+3.82+0.35mg/ml	100 & 500 ml	Selmore PH	Same as Above
Gytazole CS	22.65+3.82+0.35mg/ml	100/500 ml/1 liter	Zaidis Int.	Same as Above

5. Albendazole

Class: Benzimidazole

Notes: Broad Spectrum; Teratogenic; It should not be used in 1st trimester and lactating animals. Horses: 25-50mg/kg (Nema & Trema) =10mg/kg ; Cestods=20mg/kg

Trade Name	Composition	Packing	Company	Recommended Dose
Valbazine	11.25% / ml	30 ml & 1 liter	Pfizer	1 ml/10 kg
Albenton	11.25% / ml	100 ml & 1 liter	Zaidis Int.	1 ml/10 kg
Albanzol Granules	200 mg/g	5 gm & 100 gm	Selmore	5 g/100 kg
ValbazineBolus	250mg,750mg	10,50	Pfizer	1 bolus/25 kg
Vety Alben Bolus	250 mg/bolus	50's	Vetycare	1 bolus/25 kg
Albavet Bolus	152mg	50's	Medivet	1 bolus/30 kg

6. Triclabendazole:

Class: Benzimidazole

Horses:

Ruminants:

Trade Name	Composition	Packing	Company	Recommended Dose
Clanex	50mg	500ml, 1lit	Nawan	LA=1ml/7kg,
				SA=1ml/5kg
Fescinel SC	50mg	500ml, 1 liter	Selmore PH	Same as Above

7. Levamisole

Class: Imidazothiazoles

Notes: Must be used against Benzimedazole Resistants

Horses: 8-11mg/kg (Less used because of more toxic effects) Ruminants: 6-11mg/kg

Trade Name	Composition	Packing	Company	Recommended Dose
Nilworm	1.5% / ml	100, 250 & 11it	ICI	1 ml/2 kg
Levasel Sol.	1.5% / ml	100 ml & 1 liter	Selmore PH	Same as Above
Levasel Bolus	1.5% / ml	10's	Selmore PH	
Levozide	1.5% / ml	100 ml & 1 liter	PDH	Same as Above
Levoton	1.5% / ml	100 ml & 1 liter	Zaidis Int.	Same as Above
Vernil	1.5% / ml	100 ml & 1 liter	Star	Same as Above

8. Levamisole + Oxyclozanide

Trade Name	Composition	Packing	Company	Recommended Dose
Nilzan	1.5% + 3.09%	100, 250ml,1lit	ICI	1 ml/2 kg
Nayzan	1.5% + 3.09%	100ml, 11it	Symans	Same as Above
Levozan	1.5% + 3.09%	100ml, 11it	Star	Same as Above
Nilzan Bolus	1.5% + 3.09%	250gm bolus	ICI	1bolus/150kg

9. Levamisole + Oxyclozanide + Cobalt + Selenium

Trade Name	Composition (Per ml)	Packing	Company	Recommended Dose
Nilzan Plus	1.5%+3%+0.382%	100, 250 ml & 1 liter	ICI	1 ml/3 kg
Oxycloz LC	1.5%+3%+0.382%	100ml, 1Lit	Zaidis Int.	Same as Above
Helmex Plus	1.5%+3%+0.382%	150 ml & 1 liter	Selmore PH	Same as Above
Nawazan	1.5%+3%+0.382%	150 ml & 1 liter	Nawan	Same as Above
Vety Vermicide Susp.	1.5%+3%+0.382%	150 ml & 1 liter	Vetycare	Same as Above
Vety Vermicide Bolus	1.5%+3%+0.382%	5's	Vetycare	Same as Above
Levozan Plus	1.5%+3%+0.382%	500ml, 1lit	Star	Same as Above
Levo Power	1.5%+3%+0.382%	100 ml & 1 liter	PDH	Same as Above

Class: Imidazothiazoles

Notes: Chances of toxicity is much more than Levamisole because it has dextramisole. Horses: Not used because of more toxic effects Ruminants: 15mg/kg

Trade Name	Composition	Packing	Company	Recommended Dose
Vermisol Susp.	3 % W/V	100 ml & 1 liter	Star	1 ml/2 kg
Vermisol Bolus	3 gm/bolus	5's	Star	15mg/Kg
Nemacid Bolus	2gm/ Bolus	10's	Prix Ph.	15mg/Kg

11. Piperazine:

Class: Piperazine **Notes:** Narrow spectrum (Anti-cestodal)

Horses: 110-200mg/kg Ruminants: Not used because parasites are resistant & it gives less activity

Trade Name	Composition	Packing	Company	Recommended Dose
Helmin pipra	100%	500gm, 1kg	Biolabs	
Piperasym	100%	500gm, 1kg	Symans	

12. Nitroxynil (Used in S/C)

Class: Salicylanilides.Narrow spectrum (for Fisciolosis) Notes: High dose can cause blindness, hyperthermia and death ; Don't use in dehydrated and debilitated animal. Horses: Ruminants:10-15mg/kg

Trade Name	Composition	Packing	Company	Recommended Dose
Nitioxil 20%	200mg	50,100	Star	LA=2.5ml/50kg
(Esp. For Sheep,Goat)				SA=1ml/20kg
Trodex 34%	340mg(34%)	100ml	Saadat	LA=1.5ml/kg
	-			SA=0.5ml/20kg
Troxy 34%	340mg(34%)	100ml	Selmore Ph.	Same as above

13. Niclosamide+ others (Levamisole + Vit A)

Class: Salicylanilides

Notes: Broad spectrum (Anti-cestodal). Mostly used in dogs and sometimes cattle. Horses: Ruminants: 50-100mg/kg

Trade Name	Composition(mg/ml)	Packing	Company	Recommended Dose
VPV pwd.	400+100+0.15	100gm, 500gm	Selmore	LA=10gm/150kg, SA=1gm/10kg Feed=50gm/kg Dry Wt.
Monensil		10bolus	Bayer	Iblous/10kg

PREPARATIONS FOR BOTH INTERNAL AND EXTERNAL PARASITES

1. Ivermectin Drench

(Not for use in Dairy and 30days pre-slaughter animals)

Trade Name	Composition	Packing	Company	Recommended Dose
Ivoteck drench	0.8mg	100,500ml,1Lit	Star	1 ml/4kg PO

2. Ivermectin Injectibles

Class: Avermectins **Notes:** Not approved for use in Calves. **Horses:** 0.2mg/kg

Ruminants: 0.2mg/kg

Trade Name	Composition	Packing	Company	Recommended Dose
Ivomec	10 mg/ml	50 & 500 ml	Marial	1 ml/50 kg SC
Endectin	10 mg/ml	50 & 500 ml	ICI	Same as Above
Actimec	10 mg/ml	10 & 50 ml	Selmore Ph.	Same as Above
Wormec	10 mg/ml	10 & 50 ml	Nawan	Same as Above
Unimec	10 mg/ml	10 & 50 ml	Hilton	Same as Above
Evomec	10 mg/ml	10 & 50 ml	PDH	Same as Above
Vermectin	10 mg/ml	10 & 50 ml	Zaidis Int.	Same as Above
Ivotek	10 mg/ml	10 & 50 ml	Star	Same as Above

3. Ivermectin + Clorsulon

Trade Name	Composition	Packing	Company	Recommended Dose
Vermectin Plus	10 + 100 mg/ml	10 & 50 ml	Zaidis Int.	1 ml/50 kg SC
Unimec Plus	10 + 100 mg/ml	10 & 50 ml	Hilton	Same as Above
Ivotek Super	10 + 100 mg/ml	50 ml	Star	Same as Above

4. Abamectin

Class: Avermectins Horses: 0.2mg/kg

Ruminants: 0.2mg/kg

Trade Name	Composition	Packing	Company	Recommended Dose
Abamec LA	10 mg/ml	50 ml	Selmore AG	1 ml/50 kg SC

5. Duramectin

Class: Avermectins Horses: 0.2mg/kg

Ruminants: 0.2mg/kg

Trade Name	Composition	Packing	Company	Recommended Dose
Dactomex	10 mg/ml	50 ml	Pfizer	1 ml/50 kg SC



PREPARATIONS FOR EXTERNAL PARASITES

1. Trichlorofon (For External Use, For Dipping)

Trade Name	Composition	Packing	Company	Recommended Dose
Ectocide	980 mg/gm	100 gm & 1 kg	Zaidis Int.	Wash Sol. = $1.5 \text{ gm}/1 \text{ lit } \text{H}_2\text{O}$
Tegafon	980 mg/gm	100 gm & 1 kg	Star	Same as Above
Seguan	980 mg/gm	100 gm & 1 kg	Symans	Same as Above
Santrifon	980 mg/gm	100 gm & 1 kg	Sana	Same as Above
Trichlorofon	980 mg/gm	1 kg	Medivet	Same as Above

2. Cypermethrine

Trade Name	Composition	Packing	Company	Recommended Dose
Ecoflece	20 mg/ml	250 ml & 1 liter	Farvet	Wash Sol. = $1 \text{ ml}/1 \text{ liter } H_2O$
Piriveex	20 mg/ml	20 & 250 ml	Invesa	Same as Above
Cyprin	20 mg/ml	100 ml & 11iter	Nawan	Same as Above

3. Deltamethrine

Trade Name	Composition	Packing	Company	Recommended Dose
Delta -25	25 mg/ml	10 & 100 ml	Selmore PH	Wash Sol. = $1 \text{ ml}/1 \text{ liter}$
				H ₂ O

4. Fipronil

Trade Name	Composition	Packing	Company	Recommended Dose
Frontline spray	2.5 mg/ml	100ml, 250ml	Marial (Saadat Co.)	Spray unless the Body
				Coat is Wet

HORMONAL DRUGS

A) Estrogen Preparations

Clinical use: for treating persistent CL, for expelling purulent material from the uterus, retained placenta and mummified fetus, and for promoting weight gain.

Side effects: cause anemia, prolonged estrus, genital irritation and follicular cysts.

Caution: Estrogens should not be given during pregnancy and always used alongwith oxytocin.

1. Stilboesterol Dipropionate

Horses: 0.3mg/kg

Ruminants:

Trade Name	Composition	Packing	Company	Recommended Dose
Stilbosterol	10 mg/ml	10 ml	Star	Ls=10 ml, Ms =4ml
				Ss=2ml

2. Estradiol Dipropionate

Horses: 1mg/kg (for estrus induction 15mg/kg TD)

Ruminants: 4-10mg/kg Sid IM

	Trade Name	Composition	Packing	Company	Recommended Dose
ſ	Agofollin	1 mg/ml	15 ml	Pfizer	Ls=5 ml, Ms=1 ml
					Ss=0.5 ml

B) Progestrone Preparations

Clinical Use: For extra supply of progesterone. Horses: 0.3-0.6 mg/kg

Ruminants:

Trac	de Name	Composition	Packing	Company	Recommended Dose
Prog	gestrone	25 micro-g/ml	10ml	Star	
Preg	tone	25 micro-g/ml	10ml	Selmore Ph.	

C) FSH Preparations

Clinical Use: For stimulation of follicles, For estrus synchronization Horses: 10-50mg/kg SD Ruminants: 5mg/kg TD

Trade Name	Composition	Packing	Company	Recommended Dose
Sigma	50units	2 ml,10ml	Sigma Aldrich Co.	Ls=2.5-5 ml Ss=1-2
				ml

D) Prostaglandins Preparations

Clinical Use: For estrus synchronization, For Follicular and Luteal Cysts. Side Effects: Should not be used in Pregnancy

1. Cloprostinol Sodium

Horses: 0.1mg/kg TD

Ruminants: 0.5mg/kg(C) O.13mg/kg(S,G) TD

Trade Name	Composition	Packing	Company	Recommended Dose
Prostinol	263 micro gm	2 ml	Selmore PH	Ls=2 ml Ms=1 ml
	/ml			Ss=0.5 ml
Clostinol	263 micro gm	2 ml	Zaidis Int.	Same as Above
	/ml			
Cyclomate	263 micro gm	2 ml	Star	Same as Above
-	/ml			
Dalmazine	75 micro gm	2 ml, 10ml	Fatro	Same as Above
(dextro-rotatory)	/ml			

2. Dinoprost Tromethanine(Natural):

Horses:0.002-0.01mg/kg SD

Ruminants: 25mg/kg(C) See Table from D.C. Blood

Trade Name	Composition	Packing	Company	Recommended Dose
Lutalyse	5 micro-g/ml	5ml	UpJohn	Ls=5 ml / condition

E) GnRH Preparations

1. Lecirelin Acetate

Horses:

Trade Name	Composition	Packing	Company	Recommended Dose
Dalmarelin	25 micro-g/ml	2 ml	Fatro	Ls=2-4 ml
	_			Ss=1-2 ml / condition

2. Buserelin Acetate

Horses: 0.04 mg/kg

Ruminants: 0.02 mg/kg

Trade Name	Composition	Packing	Company	Recommended Dose
Conceptal	4.2 micro-g/ml	2 ml	Star	Ls=2.5-5 ml
				Ss=1-2 ml / condition

F) Oxytocin Preperations

Clinical use: To increase uterine contractions during delivery, to aid in the delivery of placenta, to facilitate the involution of uterus, and to induce milk let down.

Side effects: are minimal when used according to recommendation

Horses: Retained Placenta.....0.01-0.02 mg/kg

Ruminants: Retained Placenta.....0.05-0.1 mg/kg Milk Let down.....0.025- 0.05 mg/kg

Trade Name	Composition	Packing	Company	Recommended Dose
Oxytocin LP	10 IU/ml	1 & 50 ml	Lawrence	L=1-2 ml S=0.5-1 ml
Oxytocin	10 IU/ml	50 ml	Orient	Same as Above
Oxytocin VP	10 IU/ml	50 ml	Venus	Same as Above
Oxytocin IPL	10 IU/ml	50 ml	IPL	Same as Above
Oxytocin KAK	10 IU/ml	50 ml	Kakasian	Same as Above
Oxytocin S	10 IU/ml	50 ml	Star	Same as Above

G) bST Hormone:

Notes: High dosages of bST are reported to increase the death rate of calf embryos, so starting a cow on bST during early pregnancy should probably be avoided

Trade Name	Composition	Packing	Company	Recommended Dose
Somatech INJ	500 mg of	SD	ICI	one syringe every 14
(S/C)	sometribove			days.Start during the
× ,	zinc			9th or 10th week after
				calving and continue
				until the end of
				lactation.

SPECIAL MEDICINES

A) LIVER TONICS / HEPATOCARE DRUGS

Indications: Indigestion, Cirrhosis, Ketosis, and Hepatic failure

Trade Name	Composition	Packing	Company	Recommended Dose
JETEPAR	Betaine Glucuronate, Diethanolamine	2ml IM, 10ml IV	ROTTA	10 ml/100 kg
	Glucuronate,	1011111		
	Nicotinamide Ascorbate			
Hepa-Merz	L-ornithine-L-aspartate	10ml amp	Merz	
		5g Sachet		
Hepacare	L-carnitine 50mg, Betain			
	20mg,Inositol 7mg,			
	Choline Chloride 100mg			
	Sorbitol 200mg, Mag.			
	Sulph 10mg			
Hepagen	Phenoxy-2-Methyl-2-	50 & 100 ml	Fatro	
	Propionic Acid			
	10 gm/ml			
Hepasel	Same as Above	50ml	Selmore Ph.	

B) RESPIRATORY SYS. DRUGS:

1. Herbal Expectorant:

Trade Name	Composition	Packing	Company	Recommended Dose
Saline Electuary	Amm.Chloride, Aniseed,	100 gm	-	Ls=75-100gm,
	Salt Peter, etc			Ms=50gm
				Ss=20gm

2. Aminophylline:

N6tes: when given IV it should be diluted in 100ml N.S. or 1 lit and very slow IV. Not used so much. **Horse:** 5-10mg/kg Bid PO **Ruminants:**

Trade Name	Composition	Packing	Company	Recommended Dose
Aminophyline Inj.	25mg/ml	2ml	Hosipra US	
Aminolin Syp.	32mg/5ml	100ml	Qureshi Ph.	

C) DIGESTIVE SYS. DRUGS

1. ANTIEMETICS (Mostly don't used In Farm animals)

Trade Name	Composition	Packing	Company	Recommended Dose
Maxolon (Metaclopramide)	10 mg/2ml	2 ml ampules	GSK	-
Gravinate (Dimenhydrinate)	50mg	1ml	Searle	-

2. Appetizer:

Trade Name	Composition	Packing	Company	Recommended Dose
Alvigest Pwd	Black salt, Aniseed, Omum seed, etc	100 gm	Star	Ls=75-100gm, Ms=50gm Ss=20gm

D) MULTIVITAMINS / AMINOACIDS INJECTABLES

Indication: Weakness, Management of vitamin deficiencies, correctness of stress, AND solution of anorexia

Trade Name	Composition	Packing	Company	Recommended Dose
Amivital High	Multi Vit. +A.Acids	50 & 250 ml	Atzan	As recommended
Amivicom	Multi Vit. +A.Acids	50 & 100 ml	Selmore AG	As recommended
Aminovital	Multi Vit. +A.Acids	50 & 100 ml	Star	As recommended
Aminowan	MultiVit. + A.Acids	50 & 100 ml	Nawan	LA=1 ml/10 kg SA=3ml/10kg
Novacoc	Multi Vit. +A.Acids	250 ml	Waseem Imp.	As recommended
Biodyl	ATP Q Energy	50 ml	Marial	As recommended
Matabolase	Multi Vit. +A.Acids	250 ml	Fatro	As recommended
Metabolase Forte	Multi Vit. +A.Acids	100 ml	Fatro	As recommended
Vim-Sel	Vit. E + Selenite	50 & 100 ml	Nawan	As recommended
Bejectal	Vit B-complex	1ml, 10ml	Abott	As recommended
B-Complex Inj	Per ml : Thiamine5mgb + Ribofulvin25mg +Pyridoxine2.5mg +Nicotinamide37.5 mg	50 ml	Lawrance Pharma	As recommended
Methycobal Inj	Mecobalamin 500mcg	1 ml Ampule	Hilton	As recommended

E) Tocoferol Acetate (Vit E)+ Nitro Selenites Injactables

Action: Potential source of antioxidants

Trade Name	Composition	Packing	Company	Recommended Dose
Selevit	25 mg + 2.2. mg/ml	50 & 100 ml	Fatro	20 ml/100 kg

F) MULTIVITAMIN + MINERALS (POWDER)

Indication: Weakness, reduced milk production, weak bones and less muscle accretion, reduced appetite and rough hair coat.

Trade Name	Composition	Packing	Company	Recommended Dose
Bospro	Fats +proteins + lipids	25kg	Pet-Ag products	LA = 30 gm/day/head
		-		Or 0.2-0.5% of
				finished feed
ADE Minerals	Multivit, + Multi Min.	100 g, 1 kg, 5 kg	Nawan	As recommended
L-S Minerals	Vit. + Multi minerals	100 g1 kg,10 kg,	Nawan	As recommended
		25 kg		
Vito Mineral –T	Vit. + Min. + Calcium	1 kg	Trust Pharma	As recommended
Tone Up	Vit. + Min. + Calcium	1 kg	Zaidis Int.	As recommended
Biovit Plus	Vit. + Min. + Calcium	1 kg	Ch Pharma	As recommended
Vitaton DC	Vit. + Min. + Calcium	1 kg	Samu Koria	LA = 50 gm/day/head
Calfostonic	Vit. + Min. + Calcium	1 kg	AIMS	LA = 50 gm/day/head
White Gold Granules	Multi Vit. + Minerals	1 kg	-	As recommended
Super Milk Powder	MultiVit. Minerals	1 kg	-	LA = 100 gm/day
				SA = 30g/day
University Mineral	Minerals	1 Kg	UVAS	
Mixture				

Created by : Furqan Awan *G) CALCIUM PREPERATIONS:*

Indications: Milk fever, depressing state, Hypomagnesimia.

1. Calcium Borogluconate + (Mag. Hyposulphate+ Dextrose+ Vitamins)

Trade Name	Composition	Packing	Company	Recommended Dose
Bomaflex	250mg(50mg + 250mg)	100,500ml	BioRex labs	LA=200-400ml
				SA=15-50ml
Calcent PMD	250mg(50mg + 250mg)	400ml	Nawan	Same as Above
Calpho – P	250mg(50mg + 250mg)	500ml	Selmore Ph.	Same as Above
Cacio PH	Cal. Gluconate + Vit.	250 ml	Fatro	As recommended
Milfon C	Cal. Gluconate + Vit.	300 & 450 ml	Star	As recommended
Mil D Forte	Cal. Gluconate + Vit.	300 ml	Star	As recommended

H) PHOSPHORUS PREPARATIONS

Indications: Post-Parturient Hb-urea, Myglobinuria, etc

1. Toldimfos + Vit B-12

Trade Name	Composition	Packing	Company	Recommended Dose
Tono – 10	100mg + 0.065 mg	100,500ml	Selemore	LA=15-20 ml
				SA= 5ml
Tonovit	200mg + 0.05 mg	100,500ml	Selemore	Same as Above
Vety Phospho – B	100mg + 0.065 mg	50, 100ml	Leads	Same as Above
Metafos	100 mg	50, 100ml	Star	Same as Above

I) SODIUM BICARB INJECTIBLES

Indications: Ruminal Acidosis, Lactic Acidosis, Acidic conditions

Trade Name	Composition	Packing	Company	Recommended Dose
Rexabicarb	Sodium bicarb. 7.5 %	50 ml		
Sodium Bicarb Inectibles	Sodium bicarb. 7.5 %	50ml	Hospira Inc.	

J) ANTISIALOGOGUES

1. Atropine Sulphate

Indications: Act as Pre-anaesthetic, to prevent Bradycardia, Act an Universal antidote to poisoning, and to slow a hypermotile gut.

Side effects: overdose may cause drowsiness, tachycardia, disorientation, photophobia, constipation, and anxiety. Horses: Ruminants:

Trade Name	Composition	Packing	Company	Recommended Dose
Elitopine	1 mg/ml	25 ml	Lawrence Ph.	LA&H=1 ml/8-16 kg
				SA= 1 ml/3-6 kg
Atrovet	1mg/ml	10 & 25 ml	Selmore PH	As recommended
Arosin	1 mg/ml	25 ml	PDH	As recommended
Atropin	1 mg/ml	1 ml	China	As recommended

K) DEBLOATING AGENTS

1. Polyoxythelene Oleic Acid Triglycerides

Trade Name	Composition	Packing	Company	Recommended Dose
Medioral	10 ml	25 ml	Medivet	LA= 10 ml/500 ml Luke $H_2O PO$
Blotaryl	10 ml	25 ml	Star	Same as Above
Tympablot	10 ml	25 ml	Waseem Impex	Same as Above

2. Herbal Debloating Agents

Trade Name	Composition	Packing	Company	Recommended Dose
Calcorex plus	-	60 & 120 ml	SHAHU G	As recommended
Corectus	-	120 ml	Animal Health Care	As recommended
Gastro Fit	-	25 ml	DaffenRock	As recommended

L) ANTIDIARRHEAL DRUGS

1. Sulfadiazine + Sulfadimadine + Neomycin + Hyoscine + Kaoline

Trade Name	Composition	Packing	Company	Recommended Dose
Scour X	35.5 + 28.4 + 1.8	100 & 500 ml	Selmore PH	12 ml/10 kg (PO)
	+0.04+103.3 mg/ml			
Sulfacare	Same as above	100 & 450 ml	Welcare	12 ml/10 kg (PO)

2. Sulphachlorpyridazine + Trimethoprim (Anti-coccidial)

Trade Name	Composition	Packing	Company	Recommended Dose
Cosumix plus	100g+20b/kg	20g, 200g, 1kg	Novartis	Cf = 15 gm/50 kg PO for 4-5
		and 20kg		days

3. Neomycin+Streptomycine+Sulfaguanadine+Kaolin+Pectin+bismuth Subnitrate+Vit A

Trade Name	Composition	Packing	Company	Recommended Dose
Dirroban Powder		12,120,500gm	Star	Ls=75-100gm, Ms=50gm
				Ss=20gm

M) PURGATIVES (Oral Preparations)

Trade Name	Composition	Packing	Recommended Dose
Magnesium Sulphate	Magnesium sulfate	-	LA & H=450-700 gm
			f &Cf=25-45 gm
			SA=50-150 gm
Sodium Sulfate	Sod. Sulfate	-	LA & H =450-700 gm
			f &Cf =25-50 gm
			SA=25-125gm
Istizin	Danthron	-	H=10-30 gm
			LA=20-45 gm
			SA=4-6 gm
Castor oil	Castor oil	-	SA=50-150 ml
			Cf=50-100ml
Liquid Paraffin	Paraffin		LA=100-200ml
			SA=50-100ml

N) Anti-Spasmodics

1. Hyoscine-Nbutylbromide + Metamizol Sodium

Indication: indicated control of abdominal pain (colic) associated with spas-modic colic, flatulent colic, and simple impactions in horses. Sometimes also used in Cattle.

Notes: Not for use in patients with ileus or when decreased GIT motility may be harmful.

Side Effects: include transient tachycardia, pupil dilation, decreased secretions & dry mucous membranes **Horse:** 0.3 mg/kg (30 mg per 100 kg of body weight) via slow IV, Single Dose

Trade Name	Composition	Packing	Company
Buscopan Inj.	20mg + 2.5mg	2ml, 5ml	Merck Marker

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ANTISEPTICS

Trade name	Composition	Packing	Company
Pyodine	Povidone Iodine	25 & 450 ml	Brookes
Tinc Iodine	Iodine	30 & 450 ml	Oval Pharma -
Dettol	Chlorexylenol	100 & 400 ml	Reckitt
Methylated Spirit	Methanol, Ethanol	150 & 250 ml	Oval Pharma
Zinc Oxide Powder	ZnO	300 gm	Oval Pharma
Mercurochrome	Mercurochrome	30ml,450ml	Oval Pharma



Trade name	Composition	Packing	Company
PACOM	-	1 liter	Huzaifa Int.
GAS-G	6.25gm	1 liter	Trust Pharma
(Quaternary NH3)			
Bromosept – 10%	100mg	1 Lit	Selmore AG
(Dimethyl Ammonium			
Bromide - DAB)			
Bromosept – 50 (DAB)	500mg	1 Lit	Selmore AG

INTRAVENOUS INFUSIONS

Trade name	Composition	Packing	Company
Normal Saline	NaCl = 0.9%	500 & 1000 ml	-
Ringer Lactate	Lactate as a source of bicarb.	500 & 1000 ml	-
Ringer Lactate-D	R/L + Dextrose (5%)	500 & 1000 ml	-
Dextrose 5%	5gm/100 ml	500 & 1000 ml	-

ANTISEPTIC CREAMS

Trade name	Composition	Packing	Company
Furacin Cream	0.2% Nitrofurazone	25gm	GSK
Polyfax (for skin)	Polymyxin B	10gm, 20gm	GSK
	10,000 IU		
	Bacitracin 500 IU		
Polyfax Plus (for skin)	Polymyxin B	10gmgm	GSK
	10,000 IU		
	Bacitracin 500 IU		
	Lignocain 40mg		

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Betnovate (for skin)	0.1% Betamethasone	15gm	GSK	
Genticyn	Gentamicin 0.3%.	10gm	Reckitt	

• WATER SANITIZERS

Trade name	Composition	Packing	Company	Recommended Dose
Aqua Clean	H ₂ O ₂ 50% w/v	30ml, 1Lit	Ghazi Bros.	Given below
(Only safe product)				

In absence of animal: 3% sol. In utensils; stand that for 12 Hrs and then with water In presence of animal: 1ml per 1000 lit of dinking water.

• <u>VACCINE PREPARATIONS</u>

1. Foot and Mouth Disease Vaccines:

Trade name	Composition	Packing	Company	Recommended Dose
Aftovex	-	20 ml	Marial	L=2 ml S=1 ml SC
Aftibin	-	40 L-animals	Pfizer	L=2 ml S=1 ml SC
FMD Vac (VRI)	-	300 ml	VRI Lahore	L=5 ml S=3 ml SC

2. Haemorrhagic Septicemia (HS) Vaccines:

Trade name	Composition	Packing	Company	Recommended Dose
NIAB HS Vac	-	30 ml	NIAB Fsd	L=3 ml S=2 ml SC
HS Vac (VRI)	-	300 ml	VRI Lhr	L=5 ml S=3 ml SC
Hirra HS Vac	-	50 & 300 ml	Hirra	L=5 ml S=3 ml SC
Multocina	-	50 ml	Avicina	L=5 ml S=3 ml SC

3. Anti Rabies Vaccines:

Trade name	Composition	Packing	Company	Recommended Dose
Rabisin	-	1 & 10 ml	Marial	Single Dose
Rabdomun	-	1 ml	ICI	Single Dose

4. Tetanus Anti-Toxins:

Trade name	Composition	Packing	Company	Recommended Dose
ATS	1500 IU -	-	China	As severity of
				condition
ATS	10,000 IU	-	China	As severity of
				condition

Gettimg ml from mgs of dose:

Multiply Weight x mg per kg Now divide those required mgs with mgs of drug composition Mg per kg / mg per ml The ans will be the ML OF THAT DRUG.....

For getting ml/kg ratio:

Divide total weight over the total ml of that drug to be used