



MINISTRY OF AGRICULTURE AND LIVESTOCK  
DEVELOPMENT  
STATE DEPARTMENT FOR LIVESTOCK DEVELOPMENT  
DIRECTORATE OF VETERINARY SERVICES

# Essential Veterinary Medicines List for the Republic of Kenya





MINISTRY OF AGRICULTURE AND LIVESTOCK  
DEVELOPMENT  
STATE DEPARTMENT FOR LIVESTOCK DEVELOPMENT  
DIRECTORATE OF VETERINARY SERVICES

# Essential Veterinary Medicines List for the Republic of Kenya

©2025 Directorate of Veterinary Services

The Ministry of Agriculture and Livestock Development copyright this publication. It is licensed for use under the Creative Commons Attribution Non-Commercial-Share Alike 3.0 Unreported License. To view this license, visit <http://creativecommons.org/licenses/by-nc-sa/3.0/>. Unless otherwise noted, you are free to copy, duplicate, or reproduce, and distribute, display, or transmit any part of this publication or portions thereof without permission, and to make translations, adaptations, or other derivative works under the following conditions:

Any part of this document may be freely reviewed, quoted, reproduced or translated in full or in part, provided that the source is properly acknowledged. It may not be sold or used in conjunction with commercial purposes or for profit.

**Cover photo:** Geoffrey Njenga/International Livestock Research Institute (ILRI).

**Suggested citation:** Ministry of Agriculture and Livestock Development. 2025. Essential Veterinary Medicines List for the Republic of Kenya. Nairobi, Kenya.

**Published by:** Ministry of Agriculture and Livestock Development,  
Directorate of Veterinary Services  
Kabete Veterinary Research Laboratories  
P.O Box 29114-00625, Kangemi  
Nairobi, Kenya.

## ACKNOWLEDGEMENTS

The Government of Kenya, through the Directorate of Veterinary Services (DVS) and the Veterinary Medicines Directorate (VMD), wishes to express its deep appreciation to all partners, institutions, and individuals who supported the development of the Essential Veterinary Medicines List (EVML) for the Republic of Kenya. Special recognition is extended to the University of Nairobi – Faculty of Veterinary Medicine, under the leadership of Prof. Demesi Mande, for providing overall guidance, coordination, and technical oversight during the drafting process.

The Government further acknowledges the Fleming Fund Kenya Grant II, implemented through the International Livestock Research Institute (ILRI), for providing the technical expertise and financial support that facilitated the conceptualisation, drafting, and production of this document.

Appreciation is also extended to The Brooke for its strategic partnership and financial and technical support provided through the Antimicrobial Resistance (AMR) One Health (AMROH) Regional Grant funded by the Fleming Fund. We acknowledge the dedication of members of the multi-sectoral Technical Working Group (TWG), comprising representatives from academia, research institutions, professional associations, and county veterinary services.

Finally, heartfelt thanks go to all stakeholders and participants who provided invaluable technical input during consultative and validation workshops. Their insights, drawn from both public and private practice, ensured that the EVML-Kenya remains practical, evidence-based, and responsive to national needs. The names and institutional affiliations of contributors are listed in the appendix of this document.

## FOREWORD

The health of our animals is inextricably linked to the health of our people, our economy, and our environment. In Kenya, where livestock is a cornerstone of livelihoods and agriculture contributes significantly to our national wealth, ensuring the well-being of our animal population is not just a veterinary concern, but a national priority. It is with this profound sense of duty and optimism that I present the first national Essential Veterinary Medicines List (EVML) for Kenya.

This document marks a pivotal moment in our journey towards a more resilient, productive, and sustainable animal health sector. For too long, the availability and use of veterinary medicines have been fragmented. This Essential List provides a clear, evidence-based, and consensus-driven framework that prioritizes the most efficacious, safe, and cost-effective medicines for the priority diseases affecting our key animal species; from our cherished companion animals and vital food-producing livestock to our iconic wildlife.

The development of this EVML is a testament to the power of collaboration. I extend my deepest gratitude to the University of Nairobi, the International Livestock Research Institute (ILRI), The Brooke, and the Fleming Fund for their technical and financial support. My appreciation also goes to the dedicated members of the Technical Working Group and the wide array of stakeholders—from regulators, practitioners, and farmers to industry representatives and academic experts—whose invaluable input and rigorous validation have shaped this list. It is a truly Kenyan document, built on a foundation of local expertise and global best practices, aligned with the World Organisation for Animal Health (WOAH) standards and the World Health Organization's (WHO) concept of essential medicines.

The strategic importance of this list is multifold. It will guide procurement decisions, prevent shortages of critical drugs and ensure that our national veterinary services are equipped with the right tools. It will serve as a cornerstone for our ongoing battle against Antimicrobial Resistance (AMR) by promoting the prudent and responsible use of antimicrobials. Furthermore, it will empower veterinary professionals across the country with a standardised reference, enhancing the quality and consistency of care delivered to animals in every corner of our nation.

As we launch and disseminate these guidelines, our work is not over; it is evolving. This EVML is a living document which we are committed to reviewing and updating regularly to reflect emerging diseases, new scientific evidence, and the changing needs of our sector.

I hereby urge all veterinary professionals, training institutions, pharmaceutical suppliers, and policymakers to adopt and implement this Essential Veterinary Medicines List. Let us use it as our common compass to safeguard animal health, protect human health, and secure a prosperous future for all Kenyans.



**Dr. Azegele A. E. OGW**  
Director of Veterinary Services  
**Ministry of Agriculture and Livestock Development**

# TABLE OF CONTENTS

<b>ACKNOWLEDGEMENTS .....</b>	<b>4</b>
<b>FOREWORD .....</b>	<b>5</b>
<b>TABLE OF CONTENTS .....</b>	<b>6</b>
<b>LIST OF ACRONYMS .....</b>	<b>8</b>
<b>EXECUTIVE SUMMARY .....</b>	<b>10</b>
<b>1. BACKGROUND AND CONTEXT .....</b>	<b>11</b>
<b>2. PRIORITY VETERINARY MEDICINE CATEGORIES .....</b>	<b>13</b>
<b>2.1. Acaricides, Insecticides and Pesticides .....</b>	<b>13</b>
<b>2.2. Anaesthetics, Analgesics, Immobilisation Agents and Antagonists .....</b>	<b>15</b>
<b>2.3. Intravenous Fluids, Anaesthetics, and Supportive Therapies .....</b>	<b>16</b>
<b>2.4. Anti-Inflammatory Drugs .....</b>	<b>17</b>
<b>2.5. Antiseptics and Disinfectants .....</b>	<b>18</b>
<b>2.6. Metabolic Agents .....</b>	<b>20</b>
<b>2.7. Euthanasia Drugs .....</b>	<b>21</b>
<b>2.8. Antibiotics .....</b>	<b>22</b>
Aminoglycosides .....	22
Amphenicols .....	22
Azoles .....	23
Cephalosporins .....	23
Fluoroquinolones .....	24
Lincosamides .....	24
Macrolides .....	25
Penicillin Derivatives .....	25
Polymyxins .....	26
Sulphonamides .....	27
Tetracyclines .....	28
Antibiotic Combination Options in Veterinary Medicine .....	29
<b>2.9. Antifungals .....</b>	<b>30</b>
<b>2.10. Antiprotozoal Drugs .....</b>	<b>31</b>
Babesiosis and Trypanosomiasis Drugs .....	31
Theileriosis Agents .....	31
Antiprotozoal Drugs for Trichomoniasis, Giardiasis, and Histomoniasis .....	32
<b>2.11. Anthelmintics .....</b>	<b>33</b>
<b>2.12. Anticancer Agents .....</b>	<b>35</b>
<b>2.13. Hormone Therapies .....</b>	<b>36</b>

2.14. Veterinary Vaccines.....	37
2.15. Other Biologicals .....	40
2.16. Analgesics, Antipyretics, and NSAIDs for Wildlife.....	42
2.17. Wildlife Immobilisation, Sedation, and Reversal Drugs.....	43
3. REFERENCES .....	45
4. APPENDICES: ANIMAL SPECIES AND DISEASES IN KENYA.....	46
4.1. List of Avian Diseases .....	46
4.2. List of Bovine Diseases .....	47
4.3. List of Sheep and Goat Diseases.....	48
4.4. List of Equine Diseases .....	49
4.5. List of Dog and Cat Diseases.....	49
4.6. List of Pig Diseases .....	50
4.7. List of Wildlife Diseases .....	50
5. LIST OF CONTRIBUTORS .....	51

## LIST OF ACRONYMS

AHS	African Horse Sickness
AI	Avian Influenza
AMR	Antimicrobial Resistance
AMROH	Antimicrobial Resistance One Health
ASF	African Swine Fever
ATb	Avian Tuberculosis
AWaRe	Access, Watch, and Reserve (WHO antimicrobial classification)
BHV	Bovine Herpesvirus
BVD	Bovine Viral Diarrhoea
CBPP	Contagious Bovine Pleuropneumonia
CCPP	Contagious Caprine Pleuropneumonia
CDV	Canine Distemper Virus
DVS	Directorate of Veterinary Services
EAA	Ethiopian Agricultural Authority
EDTA	Ethylenediaminetetraacetic acid
EHV	Equine Herpesvirus
EIA	Equine Infectious Anaemia
EVA	Equine Viral Arteritis
EVML	Essential Veterinary Medicines List
FAO	Food and Agriculture Organization of the United Nations
FeLV	Feline Leukaemia Virus
FIV	Feline Immunodeficiency Virus
FMD	Foot and Mouth Disease
FPV	Feline Panleukopenia Virus
HCl	Hydrochloride
IB	Infectious Bronchitis
IBD	Inflammatory Bowel Disease
IBR	Infectious Bovine Rhinotracheitis
ILRI	International Livestock Research Institute
ILT	Infectious Laryngotracheitis
IV	Intravenous
KCl	Potassium chloride
KVB	Kenya Veterinary Board
LSD	Lumpy Skin Disease
MgCl <sub>2</sub>	Magnesium Chloride
MgSO <sub>4</sub>	Magnesium Sulphate
NDV	Newcastle Disease Virus

NSAID	Non-Steroidal Anti-Inflammatory Drug
PK/PD	Pharmacokinetic/Pharmacodynamic
PMSG	Pregnant Mare Serum Gonadotropin
PPD	Purified Protein Derivative
PPR	Peste des Petits Ruminants
PRP	Platelet Rich Plasma
PVS	Performance of Veterinary Services
RVF	Rift Valley Fever
TWG	Technical Working Group
VMD	Veterinary Medicines Directorate
WHO	World Health Organization
WOAH	World Organisation for Animal Health
WSAVA	World Small Animal Veterinary Association
WVA	World Veterinary Association

## EXECUTIVE SUMMARY

The central purpose of this document is to establish a customized Essential Veterinary Medicines List for Kenya. Essential veterinary medicines are defined as those satisfying the primary healthcare and welfare needs of cats, dogs, food animals, and wildlife. The list is intended to provide a minimum set of the most efficacious, safe, and cost-effective medicines needed for managing treatable animal health conditions in the country. This initiative was founded on concepts adopted from the World Health Organization (WHO) Model List of Essential Medicines, alongside specific lists developed by the World Small Animal Veterinary Association (WSAVA) for companion animals and the World Veterinary Association (WVA)/Brooke for food animals.

The development process, coordinated by a partnership between the University of Nairobi, the International Livestock Research Institute and the Brooke, involved a Technical Working Group (TWG) composed of representatives from mandated institutions, including the Directorate of Veterinary Services and the Kenya Wildlife Service, among others. Stakeholder participation was enhanced through workshops facilitated by partners. The EVML focuses on priority animal species—Aves, Bovine, Ovine and Caprine, Dogs and Cats, Equids, Swine, and Wildlife—selected based on livestock census data, socio-economic impact, and disease prevalence. The foundation of the list rests on identifying priority diseases triangulated from the World Organization for Animal Health (WOAH) list and published scientific evidence.

The core content of the document consists of detailed tables where medicines are systematically arranged and categorised as either Core (minimum essential needs) or Non-core (Complementary) (medicines requiring specialised care or having higher costs). These categories span broad pharmacological groups, including Acaricides, Insecticides and Pesticides; Anaesthetics and Analgesics; Anti-inflammatory Drugs; Antimicrobials (Antibiotics); Antifungals and Antiprotozoal Drugs; and Anthelmintics. Crucially, the list also incorporates dedicated sections for Veterinary Vaccines, Euthanasia Drugs, and specific Wildlife Immobilisation Agents.

Kenya's EVML will be updated regularly to reflect changes in emerging diseases, new pharmaceuticals and additional domains in the animal health sector which are of emerging importance nationally; in particular, future editions will specifically include camelids and fish.

The EVML for Kenya holds significant value as a customised national reference tool. By identifying core and complementary medicines, it provides guidelines for effective treatment, management, and prevention of priority diseases. Ultimately, the list helps satisfy the primary healthcare and welfare needs of various animal populations in Kenya, contributing to disease control by linking adverse health conditions with necessary, safe, and appropriate veterinary pharmaceuticals and biologicals.

## 1. BACKGROUND AND CONTEXT

Kenya's livestock sector plays a vital role in food security, livelihoods, and trade. With expanding mixed crop–livestock systems, peri-urban intensive production, and close wildlife–livestock interfaces, the demand for veterinary care and pharmaceuticals continues to grow. Companion animal ownership is also increasing in urban areas, driven by rising incomes and changing lifestyles. While access to quality-assured veterinary medicines has improved in recent years, gaps remain in equitable distribution, procurement coordination, and standardised prescriber guidance. Addressing these areas presents an important opportunity to strengthen rational antibiotic use, enhance treatment outcomes, and reduce the risk of antimicrobial resistance (AMR).

The Essential Veterinary Medicines List (EVML) marks a major step in strengthening Kenya's veterinary health system and antimicrobial stewardship. It identifies the core set of safe, and effective medicines needed for priority animal health needs and serves as both a regulatory and practical tool to guide policy, procurement, and clinical decision-making. By aligning medicine selection with evidence-based principles, Pharmacokinetic and Pharmacodynamic (PK/PD) data, and national disease priorities, the EVML improves access to quality medicines, reduces misuse, and promotes rational, narrow-spectrum antibiotic use across the veterinary sector. The Kenyan EVML aligns with broader national and international policy frameworks. It operationalises commitments in the Kenya National Action Plan on Prevention and Containment of AMR (2023–2027), particularly the objective on optimising antimicrobial use. It maps antimicrobial agents to both the World Health Organization (WHO) AWaRe and World Organisation for Animal Health (WOAH) antimicrobial importance classifications, ensuring that critically important antimicrobials are reserved for appropriate indications. The EVML also supports WOAH's Performance of Veterinary Services (PVS) pathway objectives on prudent use and harmonises with Kenya's ongoing efforts to improve veterinary legislation, AMR surveillance, and pharmaceutical regulation.

Intended users span policymakers and regulators (Directorate of Veterinary Services, Veterinary Medicines Directorate, Kenya Veterinary Board), public and private procurement entities (including county governments), and veterinary practitioners, educators, and professional bodies. The list covers core and complementary medicines for major livestock and companion animal species—cattle, small ruminants, pigs, poultry, equines, camels, dogs, cats—and selected wildlife. The document's structure prioritises animal diseases of greatest current and future relevance; applies evidence-informed selection; excludes irrational medicine combinations lacking PK/PD justification; and emphasises narrow-spectrum, rational antibiotic use. Core medicines are defined as the minimum set of medicines required for a basic veterinary health system, prioritising those that are most effective, safe, and cost-efficient for the management of key animal health conditions. These priority conditions are selected according to their current and projected public and animal health importance, as well as the feasibility of safe and economical treatment. The complementary list includes additional essential medicines needed for managing priority diseases that require specialised diagnostic or monitoring facilities, advanced veterinary care, or specific professional expertise. Medicines may also be categorised as complementary when they are consistently more expensive, demonstrate lower cost-effectiveness across settings, or are more appropriately used under professional supervision.

Development followed a multi-stage, consultative process: review of international and regional models (including WHO methodology, WSAVA lists, and WOAH frameworks); appraisal of Kenya-specific disease burdens, market authorisations, and practice evidence; plus, iterative consensus by a multi-

institutional technical working group drawn from policy, regulation, professional associations, academia, and research. Drafts were refined through national and technical workshops assessing clinical relevance, stewardship priorities, feasibility, and implementation needs. Collectively, the EVML provides a coherent, stewardship-aligned basis to improve access, standardise prescribing, and reduce AMR risk across Kenya's veterinary sector.

## 2. PRIORITY VETERINARY MEDICINE CATEGORIES

### 2.1. Acaricides, Insecticides and Pesticides

Medicine	Indications	Large Ruminants	Sheep	Goats	Equids	Pigs	Dogs	Cats	Poultry
<b>Core</b>									
Afoxolaner	Ticks, fleas						●	⚠ (Toxic)	
Amitraz	Ticks, mites, lice	●	●	●	●	●	●	●	
Chlорfenvinphos	Ticks, mites, lice, flies	●	●	●		●			●
Coumaphos	Ticks, lice, mites, screwworm/flies	●	●	●		●			●
Cypermethrin	Ticks, mites, flies, lice, fleas	●	●	●		●			●
Deltamethrin	Ticks, flies, lice, mites, fleas	●	●	●		●	●	●	●
Diazinon	Ticks, flies, lice, mites, fleas	●	●	●		●			●
Fipronil	Fleas, ticks, mites					●	●	●	●
Flumethrin	Ticks, mites, lice, fleas, flies	●	●	●		●	●	●	
Malathion	Fleas, lice, mites	●	●	●		●	●	⚠ (Toxic)	●
Permethrin	Ticks, fleas, lice, flies, mites	●	●	●	●	●	●	⚠ (Toxic)	
<b>Complementary</b>									
Afoxolaner	Fleas, ticks						●	⚠ (Toxic)	
Carbaryl	Lice, fleas, mites, ticks	●	●	●	●	●	●	⚠ (Toxic)	●
Doramectin	Ticks, mites, lice, internal parasites	●	●	●	●	●			
Eprinomectin	Ticks, mites, lice, internal parasites	●	●	●	●				
Fenthion	Ticks, lice, mites, fleas	●	●	●			●	⚠ (Toxic)	●

Medicine	Indications	Large Ruminants	Sheep	Goats	Equids	Pigs	Dogs	Cats	Poultry
Fluralaner	Fleas, ticks						•	•	
Imidacloprid	Fleas, lice						•	•	•
Indoxacarb	Fleas, ticks						•	•	
Ivermectin	Ticks, mites, lice, internal parasites, flies	•	•	•	•	•	•	•	
Lotilaner	Fleas, ticks						•	•	
Milbemycins	Mites, internal parasites						•	•	
Moxidectin	Ticks, mites, lice, internal parasites	•	•	•	•	•	•	•	
Nitenpyram	Fleas						•	•	
Nolefuran	Fleas, ticks						•	•	
Propoxur	Fleas, lice, mites						•	⚠ (Toxic)	
Pyriproxyfen	Fleas, ticks, insect growth regulator						•	•	•
S-Methoprene	Fleas, ticks, insect growth regulator						•	•	
Sarolaner	Fleas, ticks						•	•	
Selamectin	Fleas, ticks, mites, heartworm prevention						•	•	
Spinosad	Fleas, lice						•	•	
Tetrachlorvinphos	Ticks, lice, fleas, mites	•	•	•			•	⚠ (Toxic)	•

## 2.2. Anaesthetics, Analgesics, Immobilisation Agents and Antagonists

Name (Other Biologicals)	Indications	Large Ruminants	Sheep	Goats	Equids	Pigs	Dogs	Cats	Poultry
Acepromazine	Sedation and anaesthetic pre-medication, antiemetic if motion sickness associated					•			
Atipamezole	Reversal agent for $\alpha$ -2 agonists	•	•	•	•		•	•	
Atropine Sulphate	Premedication, treatment of organophosphate poisoning	•	•	•	•		•	•	
Azaperone	Sedative					•			
Buprenorphine	Analgesia/pain management				•		•	•	
Dexmedetomidine	Premedication, injectable anaesthesia	•	•	•	•		•	•	
Diazepam	Anxiolytic, muscle relaxation	•	•	•	•		•	•	
Epinephrine (Adrenaline)	Emergency treatment for anaphylaxis, cardiac arrest	•	•	•	•	•	•	•	•
Glycopyrrolate	Premedication, reduces salivation	•	•	•	•		•	•	
Isoflurane	Induction and maintenance of anaesthesia				•	•	•	•	
Ketamine HCl	Induction and maintenance of anaesthesia	•	•	•	•	•	•	•	
Lignocaine HCl (Lidocaine)	Local and regional anaesthesia	•	•	•	•	•	•	•	
Medetomidine	Premedication, injectable anaesthesia	•	•	•	•		•	•	
Methadone	Analgesia/pain management				•		•	•	
Midazolam	Anxiolytic, muscle relaxation	•	•	•	•	•	•	•	
Oxygen	Inhalation anaesthesia and insufflation	•	•	•	•	•	•	•	
Sevoflurane	Induction and maintenance of anaesthesia				•		•	•	
Tiletamine-Zolazepam (Telazol, Zolatol)	Induction and maintenance of anaesthesia	•	•	•	•	•	•	•	
Tolazoline	Reversal agent for $\alpha$ -2 agonists	•	•	•	•		•	•	
Xylazine Hydrochloride	Sedation and premedication	•	•	•	•	•	•	•	
Yohimbine	Reversal agent for $\alpha$ -2 agonists	•	•	•	•		•	•	

## 2.3. Intravenous Fluids, Anaesthetics, and Supportive Therapies

Name (Other Biologicals)	Indications	Large Ruminants	Sheep	Goats	Equids	Pigs	Dogs	Cats	Poultry
Alfaxalone	Induction & maintenance of anaesthesia	•	•	•	•	•	•	•	•
Antihistamines (Hydroxyzine, Chlorphenamine, Diphenhydramine)	Treatment of allergic reactions, anaphylaxis	•	•	•	•	•	•	•	•
Colloid Solutions (Albumin, Dextrans, Gelatin, Hydroxyethyl Starch Solutions)	Hypovolemia, shock Hypoproteinaemia	•	•	•	•	•	•	•	•
Dextrose 10%	Fluid therapy, ketosis management	•	•	•	•	•	•	•	•
Dextrose 5%	Fluid therapy for water replacement	•	•	•	•	•	•	•	•
Fresh Blood	Treatment of hypovolemia, anaemia	•	•	•	•	•	•	•	•
Hartmann's Solution	Fluid therapy for shock	•	•	•	•	•	•	•	•
Heparin	Prevention of clotting disorders	•	•	•	•	•	•	•	•
Hypertonic Saline	Fluid therapy for severe dehydration	•	•	•	•	•	•	•	•
Inhalant Anaesthetics (Isoflurane, Sevoflurane)	Induction & maintenance of general anaesthesia	•	•	•	•	•	•	•	•
Lactated Ringer's Solution	Fluid therapy for shock	•	•	•	•	•	•	•	•
Lipid Emulsions	Management of toxicosis, parenteral nutrition	•	•	•	•	•	•	•	•
Mannitol	Fluid therapy for severe dehydration, cerebral oedema	•	•	•	•	•	•	•	•
Potassium Chloride	Fluid therapy for hypokalaemia	•	•	•	•	•	•	•	•
Propofol	Induction & maintenance of anaesthesia	•	•	•	•	•	•	•	•
Sodium Chloride (0.9%)	Fluid therapy for dehydration	•	•	•	•	•	•	•	•
Vitamin K1	Treatment of coagulopathies (e.g., warfarin toxicity)	•	•	•	•	•	•	•	•

## 2.4. Anti-Inflammatory Drugs

Drug Name	Indications	Large Ruminants	Sheep	Goats	Equids	Pigs	Dogs	Cats	Poultry
<b>Core</b>									
Carprofen	NSAID for osteoarthritis, post-op pain, and soft tissue inflammation					●	●	●	
Dexamethasone	Corticosteroid for severe inflammation, anaphylaxis, ketosis, and shock	●	●	●	●	●	●	●	●
Flunixin Meglumine	NSAID for colic, endotoxemia, respiratory disease, mastitis, and musculoskeletal pain	●	●	●	●	●			
Ketoprofen	NSAID for fever, mastitis, musculoskeletal pain, and inflammation	●	●	●	●	●	●	●	
Meloxicam	NSAID for arthritis, post-surgical pain, fever, and inflammation	●	●	●	●	●	●	●	
Phenylbutazone	NSAID for equine lameness, arthritis, and musculoskeletal inflammation				●	●	●		
Prednisolone	Corticosteroid for immune suppression, allergies, and inflammatory conditions	●	●	●	●	●	●	●	
<b>Complementary</b>									
Aspirin (Acetylsalicylic Acid)	NSAID for mild pain, fever, and clot prevention	●	●	●	●	●	●	●	●
Hydrocortisone	Corticosteroid for skin allergies, inflammation, and topical anti-itch therapy						●	●	
Paracetamol (Acetaminophen)	NSAID for mild pain and fever					●	●	⚠ (Toxic)	●

## 2.5. Antiseptics and Disinfectants

Drug Name	Indications	Large Ruminants	Sheep	Goats	Equids	Pigs	Dogs	Cats	Poultry
Benzalkonium Chloride	General disinfectant, antiseptic for skin and mucous membranes, equipment sterilisation (90%)	•	•	•	•	•	•	•	•
Calcium Carbonate	Disinfection of pig stalls					•			
Cetrimide	Skin antiseptic, wound cleansing, surgical scrub								
Chlorhexidine Gluconate	Skin antiseptic, surgical prep, wound cleaning, teat disinfection, equipment sterilisation	•	•	•	•	•	•	•	•
Copper Sulphate	Treatment of foot rot, hoof hardening, wound dressing (75%)	•	•	•	•	•			
Formaldehyde	High-level disinfectant, fumigation, footbath, egg disinfection (70%)					•			⚠ (Toxic)
Glutaraldehyde	Cold sterilisation of instruments, high-level disinfectant, teat dip	•				•			• ⚠ (Toxic)
Hydrogen Peroxide	Wound antiseptic, equipment sterilisation, environmental disinfection, surgical site cleaning	•	•	•	•	•	•	•	•
Iodophors (Betadine)	Wound disinfection, pre-surgical antiseptic, mastitis prevention	•	•	•	•	•	•	•	
Lactic Acid	Hoof care, teat disinfection, environmental sanitiser	•	•						
Peracetic Acid	Surface disinfection, drinking water treatment, equipment sterilisation					•			•
Phenolic Disinfectant	Environmental disinfectant, footbaths	•		•	•	•			•
Potassium Permanganate	Environmental disinfectant					X X			•
Povidone Iodine	Pre-surgical skin preparation, wound treatment, mastitis prevention	•	•	•	•	•	•	•	•

Drug Name	Indications	Large Ruminants	Sheep	Goats	Equids	Pigs	Dogs	Cats	Poultry
Propyl Alcohol	Skin antiseptic, hand sanitiser, surface disinfectant	•	•	•	•	•	•	•	•
Quaternary Ammonium	Surface disinfectant, drinking water sanitiser, equipment sterilisation (78%)	•	•	•		•			•
Silver Sulfadiazine	Wound antiseptic, burn treatment				•		•	•	
Sodium Hypochlorite	Water purification, surface disinfection, wound irrigation	•	•	•	•	•	•	•	•

## 2.6. Metabolic Agents

Drug Name	Indications/Protocol	Large Ruminants	Sheep	Goats	Equids	Pigs	Dogs	Cats	Poultry
Calcium Borogluconate	Milk Fever	•	•	•	•	•	•	•	
Calcium+Phosphorous	Growth and production								•
Calcium Borogluconate + Magnesium Hypophosphate	Milk Fever	•	•	•	•	•	•	•	
Calcium Chloride Oil Emulsion	Parturient paresis	•							
Calcium Gluconate + Ascorbic Acid	Adjunct for chronic obstructive pulmonary disease				•				
Copper Bullets	Copper supplement	•	•						
Copper EDTA	Copper supplement	•	•						
Copper Glycinate	Copper supplement	•	•						
Iron	Iron deficiency					•			
Magnesium Oxide	Rumen buffer	•							
Magnesium Sulphate	Constipation, hypomagnesaemia	•	•			•			
Selenium	Prevent deficiencies related to diseases like White muscle disease	•	•			•			

## 2.7. Euthanasia Drugs

Drug Name	Indications	Large Ruminants	Sheep	Goats	Equids	Pigs	Dogs	Cats	Poultry
<b>Core</b>									
Ketamine Hydrochloride + Pentobarbitone Sodium	IV after sedation with Xylazine or Medetomidine, followed by Pentobarbitone overdose	•	•	•	•	•	•	•	•
Magnesium Sulphate ( $MgSO_4$ ) or Magnesium Chloride ( $MgCl_2$ )	IV injection after general anaesthesia (Ketamine, Thiopental, or Pentobarbitone)	•	•	•	•	•	•	•	•
Pentobarbitone Combination (e.g., Euthasol, Fatal Plus)	IV overdose for rapid euthanasia	•	•	•	•	•	•	•	•
Pentobarbitone Sodium	Overdose IV after sedation with alpha-2 agonists (e.g., Xylazine)	•	•	•	•	•	•	•	•
Potassium Chloride (KCl)	IV injection after general anaesthesia (e.g., Ketamine, Thiopental, or Pentobarbitone)	•	•	•	•	•	•	•	•
T-61 (Tetracaine, Embutramide, Mebezonium Iodide)	IV euthanasia solution (not widely available)	•	•	•	•	•	•	•	
<b>Complementary</b>									
Carbon Dioxide ( $CO_2$ )	Inhalation euthanasia in controlled chambers (commonly used in laboratory animals & poultry)					•			

## 2.8. Antibiotics

### Aminoglycosides

Medicine	Indications	WHO (AWaRe) classification	WOAH classification	Large Ruminants	Sheep	Goats	Equids	Pigs	Dogs	Cats	Poultry
<b>Core</b>											
Gentamicin	Gram-negative infections, septicaemia, mastitis	Access	Critically important	•	•	•	•	•	•	•	•
Kanamycin	Respiratory, enteric, and soft tissue infections, mastitis	Watch	Critically important	•	•	•	•		•		•
Neomycin	Enteric infections, skin infections	Watch	Critically important	•	•	•	•		•		•
Streptomycin	Leptospirosis, bacterial pneumonia	Watch	Critically important	•	•	•	•	•			•
<b>Complementary</b>											
Amikacin	Gram-negative infections	Access	Critically important			•		•	•	•	•

### Amphenicols

Medicine	Indications	WHO (AWaRe) classification	WOAH classification	Large Ruminants	Sheep	Goats	Equids	Pigs	Dogs	Cats	Poultry
Chloramphenicol (ocular)		Access					•	•	•	•	•

## Azoles

Medicine	Indications	WHO (AWaRe) classification	WOAH classification	Large Ruminants	Sheep	Goats	Equids	Pigs	Dogs	Cats	Poultry
Metronidazole	Selected bacterial and protozoal enteric infections	Access					•	•	•	•	•

## Cephalosporins

Medicine	Indications	WHO (AWaRe) classification	WOAH classification	Large Ruminants	Sheep	Goats	Equids	Pigs	Dogs	Cats	Poultry
<b>Core</b>											
Cefalexin	Skin, respiratory, and urinary tract infections	Access	Highly important						•	•	
Cefquinome	Respiratory and mastitis infections		Critically important	•	•	•		•			•
Ceftiofur	Respiratory and systemic infections		Critically important	•	•	•	•	•			•
<b>Complementary</b>											
Cefapyrin	Mastitis	Access	Highly important	•							

### Fluoroquinolones

Medicine	Indications	WHO (AWaRe) classification	WOAH classification	Large Ruminants	Sheep	Goats	Equids	Pigs	Dogs	Cats	Poultry
<b>Core (To be used only when necessary)</b>											
Enrofloxacin	Respiratory, urinary, and soft tissue infections		Critically important	•	•	•	•	•	•		•
Marbofloxacin	Skin, urinary tract infections		Critically important						•	•	
<b>Complementary</b>											
Ciprofloxacin	Systemic bacterial infections	Watch	Critically important						•	•	•
Danofloxacin	Bovine respiratory disease		Critically important	•	•	•					•

### Lincosamides

Medicine	Indications	WHO (AWaRe) classification	WOAH classification	Large Ruminants	Sheep	Goats	Equids	Pigs	Dogs	Cats	Poultry
<b>Core</b>											
Clindamycin	Bone, dental, and soft tissue infections	Access							•	•	
Lincomycin	Respiratory and skin infections, swine dysentery	Watch	Highly important					•			•

## Macrolides

Medicine	Indications	WHO (AWaRe) classification	WOAH classification	Large Ruminants	Sheep	Goats	Equids	Pigs	Dogs	Cats	Poultry
<b>Core</b>											
Erythromycin	Respiratory and enteric infections, mastitis	Watch	Critically important	•	•	•		•			•
Tylosin	Respiratory and enteric infections		Critically important	•	•	•	•	•			•
<b>Complementary</b>											
Gamithromycin	Respiratory infections		Critically important	•	•	•					•
Tilmicosin	Respiratory infections, mastitis		Critically important	•	•	•			•		•
Tulathromycin	Bovine and swine respiratory disease		Critically important	•	•	•	•				•

## Penicillin Derivatives

Medicine	Indications	WHO (AWaRe) classification	WOAH classification	Large Ruminants	Sheep	Goats	Equids	Pigs	Dogs	Cats	Poultry
<b>Core</b>											
Amoxicillin	Respiratory and urinary tract infections	Access	Critically important	•	•	•		•	•		•
Ampicillin	Respiratory, urinary, and soft tissue infections	Access	Critically important	•	•	•	•	•			•

Medicine	Indications	WHO (AWaRe) classification	WOAH classification	Large Ruminants	Sheep	Goats	Equids	Pigs	Dogs	Cats	Poultry
Benzathine Penicillin	Long-acting bacterial infections	Access	Critically important	•	•	•	•	•			
Procaine Penicillin	Bacterial infections	Access	Critically important	•	•	•	•	•			
<b>Complementary</b>											
Cloxacillin	Mastitis	Access	Critically important	•	•	•		•			
Dicloxacillin	Skin and soft tissue infections	Access	Critically important						•	•	
Nafcillin	Staphylococcal infections	Access	Critically important						•	•	
Oxacillin	Mastitis	Access	Critically important	•	•	•		•			
Piperacillin	Broad-spectrum bacterial infections	Watch							•	•	
Ticarcillin	Pseudomonas and Gram-negative infections	Watch	Critically important						•	•	

### *Polymyxins*

Medicine	Indications	WHO (AWaRe) classification	WOAH classification	Large Ruminants	Sheep	Goats	Equids	Pigs	Dogs	Cats	Poultry
<b>Core</b>											
Polymyxin B	Septicaemia, endotoxemia	Reserve	Highly important				•		•	•	
<b>Complementary</b>											
Colistin (Polymyxin E)	Gram-negative enteric infections	Reserve	Highly important					•			•

## Sulphonamides

Medicine	Indications	WHO (AWaRe) classification	WOAH classification	Large Ruminants	Sheep	Goats	Equids	Pigs	Dogs	Cats	Poultry
<b>Core</b>											
Sulfadiazine + Trimethoprim	Broad-spectrum infections	Access	Critically important	•	•	•		•	•		•
Sulfadimethoxine	Respiratory, urinary, and systemic infections	Access	Critically important	•	•	•		•	•		•
Sulfadimidine	Broad-spectrum bacterial infections	Access	Critically important	•	•	•		•			•
Sulfamethazine	Respiratory and enteric infections		Critically important	•	•	•		•			•
<b>Complementary</b>											
Sulfacetamide	Ophthalmic infections		Critically important						•	•	
Sulfachloropyridazine	Enteric infections		Critically important					•			•
Sulfamerazine	Enteric and systemic infections	Access	Critically important	•	•	•		•			•
Sulfapyridine	Respiratory and systemic infections	Access	Critically important	•	•	•		•			
Sulfaquinoxaline	Coccidiosis, enteric infections		Critically important								•
Sulfasalazine	Inflammatory bowel disease (IBD), colitis		Critically important						•	•	
Sulfathiazole	Respiratory and enteric infections	Access	Critically important					•			•

## ***Tetracyclines***

Medicine	Indications	WHO (AWaRe) classification	WOAH classification	Large Ruminants	Sheep	Goats	Equids	Pigs	Dogs	Cats	Poultry
<b>Core</b>											
Chlortetracycline	Respiratory, enteric, and uterine infections	Watch	Critically important	•	•	•		•			•
Doxycycline	Respiratory and tick-borne infections	Access	Critically important						•	•	•
Oxytetracycline	Respiratory, urinary, soft tissue, and uterine infections	Watch	Critically important	•	•	•		•	•		•
Tetracycline	Broad-spectrum infections	Access	Critically important	•	•	•		•			•
<b>Complementary</b>											
Demeclocycline	Dermatological infections, leptospirosis	Watch							•	•	
Minocycline	Skin, respiratory, and urinary infections	Watch – oral Reserve - Intravenous							•	•	
Tigecycline	Multi-drug-resistant bacterial infections	Reserve							•	•	

### **Antibiotic Combination Options in Veterinary Medicine**

Medicine	Indications	WHO (AWaRe) classification	WOAH classification	Large Ruminants	Sheep	Goats	Equids	Pigs	Dogs	Cats	Poultry
<b>Core</b>											
Amoxicillin + Clavulanic Acid	Respiratory, urinary, and soft tissue infections	Access	Critically important						•	•	•
Penicillin + Streptomycin	Wound and systemic infections	-		•	•	•	•	•	•		
Sulfadiazine + Trimethoprim	Respiratory, urinary, and systemic infections	Access	Critically important	•	•	•			•	•	•

## 2.9. Antifungals

Medicine	Indications	Large Ruminants	Sheep	Goats	Equids	Pigs	Dogs	Cats	Poultry
<b>Core</b>									
Amphotericin-B	Systemic fungal infections (blastomycosis, cryptococcosis, histoplasmosis)	●	●	●	●		●	●	
Chlorhexidine	Skin and wound disinfection, fungal and bacterial infections	●	●	●	●	●	●	●	●
Clotrimazole	Dermatophytosis, otitis externa due to fungal infections						●	●	
Enilconazole	Dermatophytosis (ringworm)	●	●	●	●		●		
Fluconazole	Cryptococcosis, candidiasis, systemic mycoses				●		●	●	
Griseofulvin	Dermatophytosis (ringworm)			●			●	●	
Itraconazole	Systemic fungal infections, dermatophytosis, aspergillosis				●		●	●	
Ketoconazole	Systemic and superficial fungal infections, <i>Malassezia</i> dermatitis				●		●	●	
Lime Sulphur	Dermatophytosis, mange, <i>Malassezia</i> infections						●	●	
Miconazole	Dermatophytosis, <i>Malassezia</i> infections						●	●	
Nystatin	Yeast infections ( <i>Candida spp.</i> ), oral and gastrointestinal fungal infections					●	●	●	
Povidone-iodine	Skin and wound disinfection, fungal infections	●	●	●	●	●	●	●	●
<b>Complementary</b>									
Copper Sulphate	Hoof infections, dermatophytosis, wound antiseptic	●	●	●	●				
Potassium Permanganate	Fungal skin infections, wound cleansing	●			●		●		
Silver Sulfadiazine	Burns, skin infections, dermatophytosis				●		●	●	
Sodium Hypochlorite	Fungal skin infections	●	●	●					
Sodium Iodide	Sporotrichosis, actinobacillosis, Actinomycosis	●			●				
Terbinafine	Dermatophytosis, <i>Malassezia</i> infections				●		●	●	

## 2.10. Antiprotozoal Drugs

### *Babesiosis and Trypanosomiasis Drugs*

Medicine	Indications	Large Ruminants	Sheep	Goats	Equids	Pigs	Dogs	Cats
<b>Core</b>								
Diminazene Aceturate	Babesiosis, Trypanosomiasis	•	•	•	•		•	
Imidocarb Dipropionate	Babesiosis, Ehrlichiosis	•			•		•	•
Isometamidium Chloride	Trypanosomiasis	•						
Homidium Chloride	Trypanosomiasis	•						
<b>Complementary</b>								
Amicarbalide	Babesiosis	•	•	•				
Atovaquone	Babesiosis (in combination therapy)						•	
Azithromycin	Babesiosis (adjunct therapy)						•	
Buparvaquone	Theileriosis	•	•	•				
Parvaquone	Babesiosis, Theileriosis	•						
Phenamidine	Babesiosis, Trypanosomiasis	•						

### *Theileriosis Agents*

Medicine	Indications	Large Ruminants	Sheep	Goats	Equids	Pigs	Dogs	Cats
<b>Core</b>								
Buparvaquone	Theileriosis	•	•	•				
Parvaquone	Theileriosis	•						
<b>Complementary</b>								
Amicarbalide	Theileriosis	•	•	•				
Halofuginone	Theileriosis (mild cases)	•						
Oxytetracycline	Theileriosis (supportive therapy)	•	•	•				

**Antiprotozoal Drugs for Trichomoniasis, Giardiasis, and Histomoniasis**

Medicine	Indications	Large Ruminants	Sheep	Goats	Equids	Pigs	Dogs	Cats	Poultry
<b>Core</b>									
Amprolium	Coccidiosis								•
Carnidazole	Avian Trichomoniasis ( <i>Trichomonas gallinae</i> )								•
Dimetridazole	Avian Trichomoniasis, Histomoniasis, Trichomoniasis	•							•
Homidium Chloride	Coccidiosis								•
Metronidazole	Giardiasis, Trichomoniasis, Avian Histomoniasis	•			•		•	•	
Ronidazole	Feline Trichomoniasis, Histomoniasis							•	
Tinidazole	Giardiasis, Trichomoniasis						•	•	
Toltrazuril	Coccidiosis	•	•	•		•			•
<b>Complementary</b>									
Ipronidazole	Histomoniasis, Avian Trichomoniasis								•
Ornidazole	Trichomoniasis, Giardiasis						•	•	
Secnidazole	Giardiasis, Trichomoniasis						•	•	

## 2.11. Anthelmintics

Medicine	Indications	Large Ruminants	Sheep	Goats	Equids	Pigs	Dogs	Cats	Poultry
<b>Core</b>									
Albendazole	Broad-spectrum anthelmintic (nematodes, cestodes, some trematodes)	•	•	•			•	•	•
Doramectin	Broad-spectrum anthelmintic and ectoparasiticide	•	•	•		•			
Eprinomectin	Broad-spectrum anthelmintic and ectoparasiticide	•	•	•	•	•	•	•	
Febantel	Pro-benzimidazole anthelmintic	•	•	•		•			
Fenbendazole	Broad-spectrum anthelmintic (nematodes, cestodes)	•	•	•	•		•	•	•
Flubendazole	Broad-spectrum benzimidazole anthelmintic	•	•	•	•	•	•	•	•
Ivermectin	Broad-spectrum anthelmintic and ectoparasiticide	•	•	•	•	•	•	•	•
Levamisole	Broad-spectrum anthelmintic (nematodes)	•	•	•		•			•
Mebendazole	Broad-spectrum benzimidazole anthelmintic	•	•	•	•	•	•	•	•
Moxidectin	Broad-spectrum anthelmintic and ectoparasiticides	•	•	•	•		•	•	
Nitroxynil	Narrow-spectrum (trematodes)	•	•	•					

Medicine	Indications	Large Ruminants	Sheep	Goats	Equids	Pigs	Dogs	Cats	Poultry
Oxfendazole	Benzimidazole metabolite (broad-spectrum anthelmintic)	•	•		•				
Oxibendazole	Broad-spectrum benzimidazole anthelmintic			•		•	•		
Oxyclozanide	Narrow-spectrum (flukicide)	•	•	•					
Piperazine citrate	Narrow-spectrum (ascarids)			•	•		•	•	•
Pyrantel pamoate	Broad-spectrum (nematodes, cestodes)	•	•	•	•	•	•	•	•
Rafoxanide	Narrow-spectrum (flukicide)	•	•	•					
Thiophanate	Pro-benzimidazole anthelmintic	•	•			•			
Triclabendazole	Narrow-spectrum (flukicide)	•	•	•					
<b>Complementary</b>									
Clorsulon	Narrow-spectrum (flukicide, often combined with ivermectin)	•	•	•					
Closantel	Narrow-spectrum (flukicide, nematodes)	•	•	•					
Derquantel	Narrow-spectrum (nematodes)	•	•	•					
Monepantel	Broad-spectrum (nematodes, including resistant strains)	•	•	•					
Morantel	Broad-spectrum (nematodes)	•	•	•		•			
Niclosamide	Narrow-spectrum (cestodes, trematodes)	•	•	•					
Praziquantel	Narrow-spectrum (cestodes, trematodes)					•	•		

## 2.12. Anticancer Agents

Drug Name	Indications	Large Ruminants	Sheep	Goats	Equids	Pigs	Dogs	Cats
<b>Core</b>								
Carboplatin	Sarcomas and carcinomas						•	•
Chlorambucil	Chronic lymphocytic leukaemia, mast cell tumours, transitional cell carcinomas						•	•
Cyclophosphamide	Lymphoma (multi-drug protocol)						•	•
Doxorubicin	Lymphoma, hemangiosarcoma, osteosarcoma, mammary carcinomas, feline injection sarcoma, epithelial and mesenchymal tumours						•	•
Prednisolone	Round cell tumours						•	•
Vinblastine	Mast cell tumours, transitional cell carcinomas						•	•
Vincristine	Lymphoma, leukaemia, TVT, hemangiosarcoma (multi-drug protocol)						•	•
<b>Complementary</b>								
Hydroxyurea	Polycythaemia vera, leukaemia						•	•
Lomustine	Cutaneous lymphoma, mastocytomas, histiocytic sarcoma						•	•
Melphalan	Multiple myeloma						•	•
Tyrosine kinase inhibitors	Various tumours						•	•

## 2.13. Hormone Therapies

Drug Name	Indications	Large Ruminants	Sheep	Goats	Equids	Pigs	Dogs	Cats
<b>Core</b>								
Buserelin Acetate	Control of ovarian follicular dynamics	•						
Clenbuterol	Uterine relaxation to postpone parturition and facilitate obstetric manipulations	•						
Cloprostenol	Luteolysis, oestrus synchronisation, pregnancy termination, uterine contractions	•	•		•			
Dinoprost	Luteolysis, oestrus synchronisation, pregnancy termination, uterine contractions	•				•		
Follicle Stimulating Hormone	Stimulates follicular growth, oestrogen production, and spermatogenesis; used for superovulation	•						
Gonadorelin	Control of ovarian follicular dynamics	•						
Oxytocin	Promotes milk letdown, adjunct treatment for mastitis or agalactia, ecbolic	•	•	•	•	•		
Pregnant mare serum gonadotropin (PMSG)	Induces ovarian follicular growth, oestrus, and superovulation	•	•	•	•	•		
Progesterone	Assists in the control of follicular dynamics, synchronisation protocols	•	•	•				
Progesterone Releasing Intravaginal Device	Assists in the control of follicular dynamics	•						

## 2.14. Veterinary Vaccines

Vaccine Name	Indications	Large Ruminants	Sheep	Goats	Equids	Pigs	Dogs	Cats	Poultry
<b>Multi-Species Core Vaccines</b>									
Black Quarter and Anthrax Vaccine	<i>Bacillus anthracis</i> & <i>Clostridium chauvoei</i>	•	•	•					
<i>Clostridial</i> spp. Vaccine	Clostridial Diseases	•	•	•		•			
Foot and Mouth Disease (FMD) Vaccine	Foot and Mouth Disease Virus	•	•	•		•			
Rabies Vaccine	Rabies Virus	•	•	•	•		•	•	
Rift Valley Fever (RVF) Vaccine	Rift Valley Fever Virus	•	•	•		•			
Tetanus Toxoid Vaccine	<i>Clostridium tetani</i>				•				•
<b>Large Ruminant Core Vaccines</b>									
Contagious Bovine Pleuropneumonia (CBPP)	<i>Mycoplasma</i> spp.	•							
Lumpy Skin Disease (LSD) Vaccine	Lumpy Skin Disease Virus	•							
Pestes des Petits Ruminants (PPR) Vaccine	PPR Virus		•	•					
<b>Large Ruminant Complementary Vaccines</b>									
Bovine Tuberculosis Vaccine	<i>Mycobacterium bovis</i>	•							
Brucellosis Vaccine (S19)	<i>Brucella abortus</i>	•							
Bovine Viral Diarrhoea (BVD) Vaccine	Bovine Viral Diarrhoea Virus	•							
Haemorrhagic Septicaemia Vaccine	<i>Pasteurella multocida</i>	•							
Infectious Bovine Rhinotracheitis (IBR) Vaccine	Bovine Herpesvirus (BHV-1)	•							
Leptospirosis Vaccine	<i>Leptospira</i> spp.	•				•			
Mastitis Vaccine	<i>Staphylococcus aureus</i> & <i>E. coli</i>	•							
<b>Sheep &amp; Goat Core Vaccines</b>									
Bluetongue Vaccine	Bluetongue Virus		•	•					

Vaccine Name	Indications	Large Ruminants	Sheep	Goats	Equids	Pigs	Dogs	Cats	Poultry
Contagious Caprine Pleuropneumonia (CCPP)	<i>Mycoplasma</i> spp.			•					
Contagious Pustular Dermatitis Vaccine	Orf Virus		•	•					
Sheep & Goat Pox Virus Vaccine	Capripoxvirus		•	•					
<b>Equine Core Vaccines</b>									
Equine Herpesvirus (EHV-1 & EHV-4) Vaccine	Equine Herpesvirus				•				
Equine Influenza Vaccine	Equine Influenza Virus				•				
Equine Viral Arteritis (EVA) Vaccine	Equine Viral Arteritis				•				
Strangles Vaccine	<i>Streptococcus equi</i>				•				
<b>Poultry Core Vaccines</b>									
Avian Encephalomyelitis Vaccine	Avian Encephalomyelitis								•
Avian Influenza Vaccine	Avian Influenza Virus								•
Fowl Pox Disease Vaccine, Turkey Pox Vaccine	Fowl Pox prevention								•
Fowl Typhoid	Salmonella prevention								•
Infectious Bronchitis (IB) Vaccine	Infectious Bronchitis								•
Infectious Bursal Disease (Gumboro) Vaccine	Infectious Bursal Disease								•
Marek's Disease Vaccine	Marek's Disease Virus								•
Newcastle Disease Virus (NDV) Vaccine	Newcastle Disease Virus								•
<b>Poultry Complementary Vaccines</b>									
Avian Encephalomyelitis Vaccine	Avian Encephalomyelitis prevention								•
Coryza Vaccine	Infectious Coryza prevention								•
Infectious Laryngotracheitis (ILT) Vaccine	ILT prevention								•

Vaccine Name	Indications	Large Ruminants	Sheep	Goats	Equids	Pigs	Dogs	Cats	Poultry
<i>Mycoplasma Gallisepticum</i> Vaccine	<i>Mycoplasma Gallisepticum</i> prevention								•
<b>WSAVA Core Vaccines (Dogs &amp; Cats)</b>									
Canine Adenovirus Vaccine	Canine Adenovirus						•		
Canine Distemper Virus (CDV) Vaccine	Canine Distemper Virus						•		
Canine Parainfluenza Vaccine	Canine Parainfluenza						•		
Canine Parvovirus Vaccine	Canine Parvovirus						•		
Feline Calicivirus Vaccine	Feline Calicivirus							•	
Feline Herpesvirus Vaccine	Feline Herpesvirus							•	
Feline Panleukopenia (FPV) Vaccine	Feline Parvovirus (Panleukopenia)							•	
<b>WSAVA Complementary Vaccines (Dogs &amp; Cats)</b>									
<i>Bordetella bronchiseptica</i> Vaccine	Kennel Cough						•		
Feline Immunodeficiency Virus (FIV) Vaccine	Feline Immunodeficiency Virus							•	
Feline Leukaemia Virus (FeLV) Vaccine	Feline Leukaemia Virus							•	
Leptospirosis Vaccine	<i>Leptospira</i> spp.						•	•	
<b>Core vaccines for pigs</b>									
Atrophic Rhinitis vaccine	<i>Pasteurella multocida</i> and <i>Bordetella bronchiseptica</i>					•			
Circovirus vaccine	Porcine circovirus 2					•			
Clostridium vaccine	<i>Clostridium</i> spp					•			
Colibacillosis vaccine	Enteric colibacillosis					•			
Erysipellosis vaccine	<i>Erysipelothrix rhusiopathiae</i>					•			
Mycoplasma vaccine	Enzootic pneumoniae					•			
Porcine parvo virus vaccine	Porcine parvovirus 1					•			

## 2.15. Other Biologicals

Name	Indications	Large Ruminants	Sheep	Goats	Equids	Pigs	Dogs	Cats	Poultry
<b>Complementary</b>									
African Horse Sickness Antiserum	African Horse Sickness treatment				•				
Anthrax Antiserum	Anthrax treatment	•	•	•	•				
Botulism Antitoxin	Botulism treatment	•	•	•	•	•	•		
Bovine Colostrum Replacements	Neonatal immunity support	•							
Brucellosis Antiserum	Brucellosis treatment	•	•	•					
Canine Parvovirus Antiserum	Parvovirus treatment						•		
Clostridial Antitoxins (e.g., Blackleg Antitoxin)	Clostridial disease treatment	•	•	•					
Equine Colostrum Replacements	Neonatal immunity support				•				
Equine Infectious Anaemia (Coggins Test Reagents)	EIA diagnosis				•				
Foot-and-Mouth Disease (FMD) Antiserum	FMD treatment	•				•			
Hyperimmune Plasma	Passive immunity support	•	•	•	•	•	•	•	
Johne's Disease (Paratuberculosis) PPD Test	Johne's disease diagnosis	•							

Name	Indications	Large Ruminants	Sheep	Goats	Equids	Pigs	Dogs	Cats	Poultry
Leptospirosis Antiserum	Leptospirosis treatment	•	•	•	•	•	•		
Mallein Purified Protein Derivative (PPD)	Glanders diagnosis				•				
Peste des Petits Ruminants (PPR) Antiserum	PPR treatment		•	•					
Platelet Rich Plasma (PRP)	Regenerative therapy	•	•	•	•	•	•	•	
Rabies Antiserum	Rabies post-exposure treatment	•	•	•	•	•	•	•	
Rinderpest Antiserum	Rinderpest treatment	•	•	•		•			
Snake Antivenom	Snakebite treatment	•	•	•	•	•	•	•	
Swine Erysipelas Antiserum	Swine erysipelas treatment					•			
Tetanus Antitoxin	Tetanus treatment	•	•	•	•		•	•	

## 2.16. Analgesics, Antipyretics, and NSAIDs for Wildlife

Drug Name	Category/Type	Indications	Carnivores	Herbivores
<b>Core</b>				
Buprenorphine	Opioid Analgesic	Moderate to severe pain control	•	
Butorphanol	Opioid Analgesic	Pain relief, sedation adjunct	•	•
Carprofen	NSAID	Pain management, inflammation, fever	•	•
Fentanyl	Opioid Analgesic	Severe pain management, post-operative care	•	
Flunixin Meglumine	NSAID	Anti-inflammatory, analgesic for colic and musculoskeletal pain	•	•
Ketoprofen	NSAID	Pain relief, fever reduction	•	•
Meloxicam	NSAID	Pain relief, anti-inflammatory	•	•
Phenylbutazone	NSAID	Musculoskeletal pain, arthritis		•
Tramadol	Opioid-Like Analgesic	Mild to moderate pain relief	•	
<b>Complementary</b>				
Gabapentin	Neuropathic Pain Relief	Chronic pain management	•	
Paracetamol	Analgesic, Antipyretic	Fever and mild pain relief	•	

## 2.17. Wildlife Immobilisation, Sedation, and Reversal Drugs

Drug Name	Category/Type	Indications	Carnivores	Herbivores
<b>Core</b>				
Azaperone	Neuroleptic Tranquilizer (Butyrophenone)	Tranquilization, stress reduction (commonly used in pigs and wildlife)		•
Carfentanil	Opioid (Morphine Derivative)	Immobilisation of large wildlife species		•
Detomidine	Alpha-2 Adrenoceptor Agonist	Sedation, analgesia (commonly used in Equids and ruminants)		•
Dexmedetomidine	Alpha-2 Adrenoceptor Agonist	More potent and selective alpha-2 agonist than medetomidine	•	•
Diazepam	Neuroleptic Tranquilizer (Benzodiazepine)	Sedation, muscle relaxation, seizure control	•	•
Etorphine HCl (M99)	Opioid (Morphine Derivative)	Potent immobilisation agent for large herbivores		•
Ketamine	Cyclohexamine (Dissociative Anaesthetic)	Induction, immobilisation, short surgical procedures	•	•
Medetomidine	Alpha-2 Adrenoceptor Agonist	Sedation, premedication, immobilisation	•	•
Midazolam	Neuroleptic Tranquilizer (Benzodiazepine)	Anxiolysis, sedation, muscle relaxation	•	•
Phencyclidine	Cyclohexamine (Dissociative Anaesthetic)	Immobilisation (historically used, now largely replaced)	•	•
Thiafentanil	Opioid (Morphine Derivative)	Ultra-potent opioid for rapid immobilisation of wildlife		•
Xylazine	Alpha-2 Adrenoceptor Agonist	Sedation, muscle relaxation, analgesia	•	•
Zoletil (Tiletamine-Zolazepam)	Neuroleptic Tranquilizer (Benzodiazepine-Dissociative)	Induction, sedation, immobilisation	•	•
Zuclopenthixol	Neuroleptic Tranquilizer (Phenothiazine)	Long-acting sedative for aggressive or stressed wildlife		•
<b>Reversal Drugs</b>				
Atipamezole	Alpha-2 Antagonist	Reversal of medetomidine/dexmedetomidine effects	•	•
Doxapram	Respiratory Stimulant	Reversal of respiratory depression due to anaesthetics	•	•

Drug Name	Category/Type	Indications	Carnivores	Herbivores
Naloxone/Naltrexone	Opioid Antagonist	Reversal of opioid sedation (e.g., etorphine, thiafentanil, carfentanil)		•
Tolazoline	Alpha-2 Antagonist	Reversal of xylazine sedation (used in ruminants)		•
Yohimbine	Alpha-2 Antagonist	Reversal of xylazine sedation	•	•

### 3. REFERENCES

Ethiopian Agricultural Authority (EAA). (2024). Lists of Essential Veterinary Medicines and Vaccines for Ethiopia. Addis Ababa: EAA.

Schmerold, I., van Geijlswijk, I., and Gehring, R. (2023). European Regulations on the Use of Antibiotics in Veterinary Medicine. *European Journal of Pharmaceutical Sciences*, Oct 1;189:106473. doi: 10.1016/j.ejps.2023.106473

Squires, R. A., Crawford, M., Marcondes, M., and Whitnley, N. (2024). World Small Animal Veterinary Association (WSAVA) Guidelines for Vaccination of Dogs and Cats. *Journal of Small Animal Practice*, 1–45.

Steagall, P. V., Pelligand, L., Page, S., Granick, J. L., Allerton, F., Bęczkowski, P. M., Weese, J. S., Hrček, A. K., Queiroga, F., and Guardabassi, L. (2023). The 2023 World Small Animal Veterinary Association (WSAVA) List of Essential Medicines for Dogs and Cats. *Journal of Small Animal Practice* 64(12):731-748. doi: 10.1111/jsap.13673.

Veterinary Medicines Directorate (VMD) and Pest Control Products Board (PCPB). (2025). Approved Veterinary Medicines and Products. Available at official websites where relevant.

World Health Organization (WHO). Model Essential Medicines List. Geneva, Switzerland: WHO.

World Organisation for Animal Health (WOAH). (2018). List of Antimicrobials of Veterinary Importance. Paris, France: WOAH.

World Organisation for Animal Health (WOAH). (2024). List of Antimicrobial Agents of Veterinary Importance. Paris, France: WOAH. Available at: <https://www.woah.org/en/document/list-of-antimicrobial-agents-of-veterinary-importance/> (Accessed 6 August 2025).

World Veterinary Association (WVA) and Brooke International. (2024). Essential Medicines for Food Animals.

World Veterinary Association (WVA) and Brooke International (2025). Essential Veterinary Medicines List (EVML) for Food-Producing Animals.

## 4. APPENDICES: ANIMAL SPECIES AND DISEASES IN KENYA

To define the scope of animal species and priority diseases addressed in this phase of the *Essential Veterinary Medicines List*, the Technical Working Group identified and included key livestock and companion animal species of national importance. This selection was informed by data from the national livestock census, the socio-economic and cultural value of each species, and the prevalence and distribution of major animal diseases across the country. The species covered in this phase include poultry, cattle (large ruminants), sheep and goats, dogs and cats, equines such as horses, donkeys and mules, pigs, and selected wildlife species including both herbivores and carnivores. The next phase of the EVML development process will extend to aquaculture, apiculture (bees), camelids, additional wildlife species, and other emerging livestock enterprises.

To provide a sound basis for decision-making on essential veterinary medicines, the Technical Working Group also identified, reviewed, and prioritised key animal diseases affecting these species. The prioritisation was informed by evidence on disease burden, public health significance, and impact on livelihoods, productivity, and trade.

### 4.1. List of Avian Diseases

1. Aflatoxicosis
2. Ascites Syndrome
3. Aspergillosis
4. Avian Chlamydiosis
5. Avian Infectious Bronchitis (AIB)
6. Avian Infectious Rhinotracheitis (AIR)
7. Avian Influenza (AI)
8. Avian Leucosis
9. Avian Mycoplasmosis (*M. gallisepticum*; *M. synoviae*)
10. Avian Rhinotracheitis
11. Avian Tuberculosis (ATb)
12. Botulism
13. Bumblefoot
14. Cestodes
15. Coccidiosis
16. Colibacillosis
17. Duck Virus Enteritis
18. Enteric Clostridial Infections
19. Fleas, Ticks, Mites and Lice (Ectoparasites)
20. Fowl Cholera
21. Fowl Pox
22. Fowl Typhoid
23. Helminths
24. Histomoniasis
25. Infectious Bursal Disease (Gumboro Disease)
26. Infectious Coryza
27. Infectious Laryngotracheitis

28. Malabsorption Syndrome
29. Marek's Disease
30. Newcastle Disease
31. Nutritional Deficiencies
32. Poisoning, e.g., Herbicides, Insecticides (e.g., Diazinon), Rodenticides, Heavy Metals (e.g., Mercury), Salts (e.g., Common Salt [NaCl])
33. Pullorum Disease
34. Turkey Pox

## 4.2. List of Bovine Diseases

1. Anthrax
2. Black Quarter Disease/Clostridium Species
3. Bovine Anaplasmosis
4. Bovine Babesiosis
5. Bovine Cysticercosis (*C. jejuni* and *C. coli*)
6. Bovine Genital Campylobacteriosis
7. Bovine Paratuberculosis/Johne's Disease
8. Bovine Spongiform Encephalopathy
9. Bovine Tuberculosis
10. Bovine Viral Diarrhoea
11. Brucellosis
12. Caseous Lymphadenitis (*Corynebacterium paratuberculosis*)
13. Contagious Bovine Pleuropneumonia (CBPP)
14. Cryptosporidiosis
15. Dermatophilosis
16. Echinococcosis; syn. Hydatidosis; *Echinococcus granulosus* and *Echinococcus multilocularis*
17. Enzootic Leukosis
18. Fasciolosis (Liver Flukes: *Fasciola hepatica* and *Fasciola gigantica*)
19. Foot and Mouth Disease (FMD)
20. Haemorrhagic Septicaemia
21. Heartwater (Bovine ehrlichiosis)
22. Infectious Bovine Rhinotracheitis
23. Infertility of all various causes
24. Leptospirosis
25. Lumpy Skin Disease
26. Lungworms (*Dictyocaulus filaria*)
27. Malignant Catarrhal Fever
28. Mange (Scabies)
29. Mastitis
30. Milk Fever
31. Q-Fever
32. Rabies
33. Rift Valley Fever
34. Rinderpest
35. Theileriosis (East Coast Fever)
36. Toxoplasmosis

37. Trichinellosis
38. Trichomoniasis
39. Trypanosomiasis (Tsetse Transmitted Disease)
40. Tularaemia

### 4.3. List of Sheep and Goat Diseases

1. Anthrax (Bacillus anthracic)
2. Babesiosis (Babesia motasi and Babesia ovis)
3. Black Quarter (Black Leg, *Clostridium chauvoei*)
4. Bloat
5. Bluetongue (Catarrhal Fever of Sheep, 'soremuzzle disease')
6. Border Disease (Border Disease Virus)
7. Caprine Arthritis/Encephalitis
8. Clostridial Enteropathies
9. Coenurosis (Coenurus cerebralis)
10. Contagious Agalactia
11. Contagious Caprine Pleuropneumonia (CCPP)
12. Contagious Ecthyma (Contagious Pustular Dermatitis, Orf)
13. Cryptosporidiosis
14. Cysticercosis (*C. tenuicollis* and *C. ovis*) Tapeworm Infestation
15. Echinococcosis
16. Ectoparasites (Fleas, Ticks, Mites and Lice)
17. Enzootic Abortion of Ewes (*Chlamydia abortus*)
18. Fasciolosis (Liver Flukes: *Fasciola hepatica* and *Fasciola gigantica*)
19. Heartwater (*Ehrlichia ruminantium*)
20. Helminthiasis such as Hemonchosis
21. Infectious Necrotic Hepatitis, Black Disease (*Clostridium novyi*)
22. Metabolic Diseases such as Pregnancy Toxaemia
23. Myiasis
24. Nairobi Sheep Disease
25. Nutritional Deficiencies
26. Ovine Chlamydiosis
27. Ovine Epididymitis (*Brucella ovis*)
28. Ovine Progressive Interstitial Pneumonia (Maedi, Maedi-visna)
29. Ovine Pulmonary Adenomatosis
30. Pestes des Petits Ruminants (PPR)
31. Poisoning
32. Q-Fever
33. Rift Valley Fever
34. Salmonellosis
35. Scrapie
36. Sheep and Goat Pox
37. *Stilecia hepatica* (Tapeworm) Infestation
38. Tetanus
39. Toxoplasmosis (*Toxoplasma gondii*)
40. Trypanosomiasis

## 4.4. List of Equine Diseases

1. African Horse Sickness
2. Anthrax
3. Ectoparasites (Fleas, Ticks, Mites and Lice)
4. Epizootic Lymphangitis
5. Equine Herpes Virus
6. Equine Infectious Anaemia
7. Equine Influenza
8. Equine Piroplasmosis (Babesiosis)
9. Helminth Infestations
10. Strangles
11. Tetanus
12. Theileriosis
13. Toxoplasmosis
14. Trypanosomiasis
15. West Nile Virus

## 4.5. List of Dog and Cat Diseases

1. Aflatoxicosis
2. Agalactia
3. Anthrax
4. Arthritis
5. Babesiosis
6. Brucellosis
7. Canine Distemper
8. Canine Parvovirus Disease
9. Eclampsia
10. Ehrlichiosis
11. Feline Herpes
12. Feline Influenza Virus Disease
13. Feline Panleukopenia
14. Flea allergic dermatitis
15. Heartworm Disease/*Dirofilaria immitis* Infestation
16. Helminthiasis
17. Hepatitis
18. Hip Dysplasia
19. Hydatidosis (Cysticercosis)
20. Leptospirosis
21. Malessezia
22. Mange/Demodicosis
23. Myiasis
24. Toxoplasmosis
25. Trichinellosis
26. Trichomoniasis
27. Trypanosomiasis

## 4.6. List of Pig Diseases

1. Actinobacillosis
2. African Swine Fever
3. Anthrax
4. Atrophic Rhinitis
5. Brucellosis
6. Clostridiosis
7. Coccidiosis
8. Colibacillosis
9. Ectoparasites – Mange, Ticks, Lice, Fleas
10. Exudative Epidermatitis
11. Foot and Mouth Disease
12. Helminthiasis – Ascaris, *Taenia solium*, Pinworms, Hookworms, Whipworm
13. Iron Deficiency
14. Leptospirosis
15. Mastitis, Metritis Agalactia Syndrome
16. Mycobacterium
17. Mycoplasmosis
18. Porcine Circovirus (PCV)
19. Porcine Cysticercosis
20. Porcine Parvovirus Disease
21. Porcine Stress Syndrome
22. Salmonellosis
23. Swine Dysentery
24. Swine Erysipelosis
25. Swine Influenza Virus Disease
26. Trichinellosis

## 4.7. List of Wildlife Diseases

1. African Horse Sickness
2. African Swine Fever
3. Anthrax
4. Botulism
5. Brucellosis
6. Contagious Bovine Pleuropneumonia
7. Foot and Mouth Disease
8. Heartwater
9. Malignant Catarrhal Fever
10. Peste Des Petits Ruminants
11. Rift Valley Fever
12. Rinderpest
13. Theileriosis (Corridor Disease)
14. Trypanosomiasis
15. Tuberculosis

## 5. LIST OF CONTRIBUTORS

No.	Name	Institution/Affiliation
1	Dr. Allan E. Azegele	State Department for Livestock
2	Prof. John D. Mande	University of Nairobi
3	Dr. Monicah Maichomo	Kenya Livestock Research Organization
4	Dr. Samson Muchelule	Kenya Veterinary Association
5	Dr. Allan Elavula	Kenya Small & Companion Animal Veterinary Association
6	Dr. Sharon A. Tsigadi	Farmers' Choice (K) Ltd
7	Mr. Titus Gaitho	Kenya Wildlife Service
8	Dr. Naphtali Mwanziki	Directorate of Veterinary Services
9	Prof. Charles K. Gachuiiri	University of Nairobi
10	Dr. Isaac M. Mapenay	University of Nairobi
11	Prof. Jackson N. Ombui	University of Nairobi
12	Prof. George C. Gitao	University of Nairobi
13	Dr. Lucy W. Njagi	University of Nairobi
14	Prof. David O. Kihurani	University of Nairobi
15	Dr. Daniel M. Wambua	University of Nairobi
16	Dr. Ambrose Kipyegon	University of Nairobi
17	Dr. Willy Mwangi Edwin	University of Nairobi
18	Dr. Wyckliff Ngetich	Egerton University
19	Dr. Irene Kamanja	University of Nairobi
20	Dr. Everlyne Mwihia	Egerton University
21	Mr. Benson Ameda	African Association of Veterinary Associations
22	Dr. Anderson Gitari	Andys Veterinary Clinics – Ngong Road
23	Dr. Vijay S. Varma	The Jockey Club
24	Dr. John Muchibi	Elgon (K) Ltd
25	Dr. Maurice Ongutu	Veterinary Inputs Suppliers Association in Kenya/ Dolian
26	Dr. Patrick Njanga	Lesukut (K) Ltd
27	Dr. Tom Odula	Juanco Ltd
28	Dr. Michelle Kasudi	International Livestock Research Institute (ILRI)
29	Dr. James Kithuka	Brooke East Africa
30	Dr. Dominic O. Ochwang'i	University of Nairobi
31	Dr. Tequiero A. Okumu	University of Nairobi
32	Dr. Joshua O. Onono	University of Nairobi
33	Dr. Felix M. Kibegwa	University of Nairobi
34	Dr. Jane Lwoyer	World Organisation for Animal Health (WOAH)

No.	Name	Institution/Affiliation
35	Ms. Sylvia Muthama	Kenya National Tsetse and Trypanosomiasis Eradication Commission (KENTTEC)
36	Dr. Elloy Otieno	Veterinary Medicines Directorate
37	Dr. Romona M. Ndanyi	Directorate of Veterinary Services
38	Prof. Eric Fevre	International Livestock Research Institute (ILRI)
39	Dr Dishon Muloi	International Livestock Research Institute (ILRI)
40	Dr. Elijah Munguti	Veterinary Medicines Directorate
41	Dr. Ernest Omondi	Pest Control Products Board (PCPB)
42	Dr. Caleb Oburu Orente	Egerton University
43	Dr. Jonathan Olenyo	Animal Health and Industry Training Institute, Kabete
44	Dr. Francis Lekan	KenChic Ltd
45	Dr. Mose Olum	Kenya Livestock Research Organization
46	Dr. Gila Jaquinvidah	Kenya Veterinary Board



The UK Department of Health and Social Care (DHSC)'s Fleming Fund is a UK aid programme supporting up to 25 countries across Africa and Asia to tackle antimicrobial resistance (AMR), a leading contributor to deaths from infectious diseases worldwide. The Fleming Fund invests in strengthening AMR surveillance systems through a portfolio of country grants, regional grants and fellowships managed by Mott MacDonald, and global projects managed by DHSC.