Contents

Chapter 1: Introduction

1-13

Parasitology and Parasitic Associations; Commensalism; Mutualism; Phoresis; Predation; Parasitism; Types of Parasites; Types of hosts; Definitive or Final Host; Intermediate Host; Paratenic or Transport Host; Vectors; Biological Vector; Mechanical Vector; Carrier Host; Reservoir Host; Types of Life Cycle; Host parasite interaction; Zoonosis.

Chapter 2: Diagnosis of Ruminant Parasites

14-32

Faecal Sample Collection, Preservation and Processesing; Number of Samples to Collect; Sample Collection; Sample Preservation; Some common Fixatives; Formalin; Schaudin's fluid; Polyvinyl alcohol; Merthiolate-iodine-formalin; Sodium acetate-acetic acid-formalin; Faecal Examination Techniques; Gross examination; Microscopic examination; Direct Smear Method: Faecal Concentration Methods: Passive Flotation: Centrifugal Flotation: Baermann Sedimentation: Simple Gravity Sedimentation; Quantitative Concentration technique/Egg counting technique; Stoll's Dilution Method; Mc Master Method; Egg counting technique for trematodes; Preparation of faecal cultures; Post mortem examination; Recovery and processing of trematode and cestode parasites; Fixation; Staining; Preparation of permanent slides of cestodes; Fixation; Staining; Dehydration; Collection of Gut Nematodes; Recovery of lung worms; Preparation of whole mount specimens of Nematodes; Fixation; Clearing; Mounting; Permanent mounts; Faecal Staining; Modified Acid-fast Stain; Necropsy and Worm Counts; Parasite Collection and Preservation; Helminths; Arthropods; Antigen and Fluorescent Antibody Diagnostics: Skin Samples: Microscopy Techniques: Use of the Ocular Micrometer.

Chapter 3.1: Veterinary Protozoology

33-45

Phylum-Protozoa; Subphylum-Sporozoa; Class-Coccidia; Family-Eimeriidae; Eimeria; Cryptosporidium parvum; Family-Sarcocystidae; Toxoplasma gondii; Class-Piroplasmidia; Babesia bigemina.

Chapter 3.2: Veterinary Helmintology

46-96

Phylum – Nemathelminthes; Class-Nematoda; Basic Life Cycle; Superfamily -Trichostrongyloidea; Haemonchus contortus; Ostertagia ostertagi; Trichostrongylus axei; Trichostrongylus colubriformis; Nematodirus battus: Cooperia curiticei: Dictvocaulus filarial: Muellerius capillaris; Superfamily- Strongyloidea; Bunostomum trigonocephalum; Chabertia ovina; Oesophago-stomum columbianum; Superfamily-Rhabditoidea; Strongyloides papillosus; Superfamily-Trichuroidea; Trichuris ovis; Capillaria brevipes; Phylum-Platyhelminthes; Class: Trematoda; Subclass-Digenea; Family-Fasciolidae; Fasciola hepatica; Family-Dicrocoeliidae: Dicrocoelium dendriticum: Family-Paramphistomatidae; Paramphistomum cervi; Class-Cestoda; Family-Anoplocephalidae; Family-Thysanosomidae; Moniezia expansa;

Handbook of Veterinary Parasitology

Avitellina centripunctata; Thysanosoma actinioides; Stilesia globipunctata; Cysticercus ovis; Echinococcus granulosus;

Chapter 3.3: Veterinary Entomology

97-120

Phylum-Arthopoda; Classification of Arthopods; Class-Insecta; Order-Diptera; Family-Oestridae; Oestrus ovis; Family-Hippoboscidae; Melophagus ovinus; Order-Phthiraptera; Suborder-Mallophaga; Bovicola ovis; Linognathus ovillus; Class-Arachnida; Order-Acarina; The Ticks; Family-Ixodidae; Ixodes ricinus; Boophilus; Hyalomma; Family-Argasidae; Treatment, Prevention and Control of Ticks; The Mites; Family-Sarcoptidae; Sarcoptes scabiei; Family-Psoroptidae; Psoroptes ovis; Chorioptes bovis; Family-Calliphoridae; Fly Strike of Myiasis.

Chapter 4: Epidemiology of Gastrointestinal Parasites

121-129

Hypobiosis or Arrested Larval Development; Immunity of the Sheep and Parasite Burden; Periparturient Egg Rise (PPER); Genetic Resistance to Infection with Parasites; Resilience to Infection with Parasites; Normal Patterns of Infectivity on the Pasture; Temperature; Humidity; Over-Wintering on Pasture; Survival on Pasture during the Grazing Season; Generations on Pasture - Teladorsagia and Trichostrongylus; Generations on Pasture - Haemonchus; Infection from Previous Season; Grazing Heavily Infested Pastures; Individual Variability in FEC; Clinical Changes in the Sheep; Diarrhea / DAG scores; Poor Weight Gains / Weight Loss (Body Condition Score); Anaemia; Hypoproteinemia (Bottle Jaw).

Chapter 5: Anthelmintics

130-138

Characteristics and selection of anthelmintics; Administration of anthelmintics; Dosing by mouth; Dosing by injection; Dosing by external application; Testing of anthelmintics; Summary of anthelmintics for the treatment of gastro-intestinal Nematodes, Lungworms, Tapeworms and Flukes: Benzimidazoles (BZ); *Imidazothiazoles* Tetrahydropyrimidines; Macrocyclic Lactones (ML); Amino-Acetonitrile Derivatives (AAD); When to treat?; Proper treatment timing; Efficacy against Hypobiotic Gastrointestinal Nematodes; Failure to Administer an Anthelmintic Properly; Reinfection after Treatment; Anthelmintic Resistance (AR); How does Anthelmintic resistance develop?; Detection of Anthelmintic resistance; Testing for anthelmintic resistance; Preventing the development of anthelmintic resistance; Pasture Rotation; Introduction of Resistant Parasites; Detecting the Presence of anthelmintic resistance; Faecal Egg Count Reduction Test (FECRT); Drench Response Test; Larval Development Assays (In vitro test); Egg hatch test (EHT).

Chapter 6: Parasite Control Using Sustainable Approach

139-144

Genetic Selection; Good Management; Nutritional Management; Environmental Hygiene; Use of Clean or Safe Pastures; Grazing Strategies; Maintain a Minimal Population of Susceptible GIN on Pasture; Reduce the Infectivity of a Pasture by Using Pasture Rotation; Zero Grazing; Understand the Sources of Pasture Contamination; Understand the Behaviour of the Free-Living Stages; Targeted Selective

Handbook of Veterinary Parasitology

Treatments Targeted Treatments; Treatment of Breeding Animals at Housing in the fall; Treatment of New Introductions; Condensed Tannin Containing Pasture Plants; Nematophagus Fungi; Copper Oxide; Alternative Dewormers; Prophylactic / Metaphylactic Treatment;

Glossary References and Recommended Reading	145-150 151-152		
		Appendix: Eggs of different helminth parasites	153