COLOR HAND BOOK OF COMMON DISEASES AFFECTING POULTRY IN KERALA

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This color handbook is the outcome of the project on
“Micro organisms associated with mortality/low egg production in domestic poultry”

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Department of Animal Husbandry, Kerala
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Dr. Sunitha Karunakaran
Message

I am happy to know that a colour handbook on “Common diseases affecting domestic poultry in Kerala” is being prepared by Dr Sunitha Karunakaran, Veterinary Surgeon, Veterinary Clinical Laboratory, District Veterinary Centre, Palakkad after the completion of the Research and Development Project on “Micro organisms associated with mortality or low egg production in domestic poultry” done during 2008 to 2012. Animal Husbandry Department has been encouraging dedicated research activities in the field level so as to help Veterinarians to keep abreast of the recent advances in this field and serve the farming community better. I hope that the colour hand book is one such initiative, which will help in early and accurate diagnosis of diseases associated with mortality in domestic poultry. I also believe that this colour hand book will become a ready reference in our institutions to help the Veterinarians to specifically identify the pathogens associated with mortality in various species of domestic poultry as well as in recently domesticated, exotic birds like Emu, African Love birds etc. I wish the endeavour all success.

Dr K.G.Sumu
MESSAGE

I am happy to note that a color handbook on “Common diseases affecting domestic poultry in Kerala” is being prepared by Dr Sunitha Karunakaran, Veterinary Surgeon, Veterinary Clinical Laboratory, District Veterinary Centre, Palakkad after the completion of the Research and Development Project on “Micro organisms associated with mortality or low egg production in domestic poultry”.

I understand that there are only very few studies conducted on diseases affecting domestic poultry in Kerala under field conditions. Representation of the lesions of the diseases with few remarks about the etiological agent and method of diagnosis in the form of a color handbook will become a ready reference to the practising Veterinarians in the field. I have also immense pleasure to note that such an initiative has come up from Palakkad district, which contributes a major share in the state poultry industry owing to the presence of many large, small as well as marginal farmers hailing from different corners of the district.

The earnest and dedicated effort taken by the author of this book is sincerely appreciated.

Dr .M. SUMANGALA
MESSAGE

Poultry industry has transformed from meager backyard farming to a well-organized scientific techno commercial industry. India is the second egg producer and the third largest broiler producer in the world. Kerala is also having the pattern of rearing both backyard and organized, in its own way. On research side quantum leaps are taking place in the international poultry husbandry practices not only in housing, feeding, breeding, management, diseases but also in biosecurity protocols. We are now discussing even on designer eggs with nutraceuticals in diet.

This work of Dr. Sunitha Karunakaran places her among the poultry personalities, who contributed much in the exploration of poultry diseases and production associated infections, at field level. Veterinary experts at all levels and poultry owners could be benefited by this research and development work. Discipline in scientific work, amicability and dedicated hard work, self-explanatory photographs are the glittering qualities of Dr. Sunitha’s work.

It is a matter of great pleasure that this work of Dr. Sunitha will serve as a good reference to the Veterinarians in poultry disease diagnosis.

Dr. N. SUDHODANAN
INTRODUCTION

Significant achievements in poultry development have come from the initiative taken by private sectors for commercial pure line breeding. Despite the advancements, poultry industry incurs losses due to infectious diseases viz: bacterial or viral. The disease scenario is complicated by emergence of new diseases, re-emergence of hitherto controlled diseases, outbreaks caused by new variants and resultant break down of immunity, poor vaccination strategy, spread through unnatural hosts etc. The need for increased production in terms of eggs and meat has resulted in the evolution of new breeds and strains. However these new breeds and strains have low disease resistance, resulting in economic loss.

The total poultry population estimated in Palakkad district as per 2007 census is 6, 85,349 fowl, 12,212 ducks, 891 turkeys, 7529 quails and 10, 264 other birds. There are about 137 poultry farms in the district with a total population of 78,030 birds, which included commercial large scale farmers and marginal farmers who keep limited number of birds. Besides these there are migratory flocks of ducks present in the district. Annual egg and poultry meat production for the district is 1232 lakhs eggs and 481 MT meat respectively. There is import of about 41.4 crores of eggs and 2 crore 85 lakhs of birds per year through the check posts to Kerala state.

Due to its close association with poultry industry in neighboring state Tamilnadu, chances of disease outbreaks among domestic flocks in the district is also very high. All these necessitated the need for accurate and scientific diagnostic methods to be available in the Clinical Laboratory, attached to District Veterinary Centre, which is functioning as a referral centre in the district.

Domestic poultry including chicken, ducks, quails, turkeys etc are brought to clinical laboratory by private farmers to identify cause of death. But only by doing post-mortem examination it is very difficult to arrive at a confirmatory diagnosis especially when post mortem lesions overlap in many of bacterial or viral diseases.

The project titled “Micro organisms associated with mortality/low egg production in domestic poultry” was completed with the aim to assess the role of bacteria like Pasteurella, Salmonella and Escherichia coli and viral agents like New Castle Disease Virus (NDV), Infectious Laryngo Tracheitis (ILT), Infectious Bronchitis (IB) etc in causing mortality in domestic flocks. This project also helped District Veterinary Centre to equip with modern facilities that ensured quality Veterinary care and treatment to poultry farmers based on accurate diagnosis of diseases, reduced treatment cost, reduced mortality and increased egg production by timely interference in disease process.

During the course of my work to complete the project, I came across a variety of bacterial diseases affecting not only poultry, but exotic birds like Emu. Documentation of the lesions identified in various species of poultry in the form of a color hand book will be of great help to practicing Veterinarians.

Dr. Sunitha Karunakaran
Contents

**DISEASES OF POULTRY**

**PART-I- BACTERIAL DISEASES**

- Fowl typhoid - *Salmonella gallinarum*
- Fowl cholera - *Pasteurella multocida*
- Staphylococcal infection in chicks
- Diseases due to *Escherichia coli*
  - *Escherichia coli* infection in poultry
  - *Escherichia coli* infection in Guinea fowl
  - *Escherichia coli* infection in Silky fowl

**PART-II- VIRAL DISEASES**

- Newcastle Disease (Ranikhet Disease) in poultry
- Newcastle Disease (Ranikhet Disease) in Kangayam fowl
- Infectious Bursal Disease (IBD)-Gumboro disease
- Infectious Bronchitis (IB) in poultry

**DISEASES OF TURKEY**

**PART-I- BACTERIAL DISEASES**

- Pasteurellosis - *Pasteurella multocida*

**DISEASES OF QUAILS**

**PART-I- BACTERIAL DISEASES**

- Pasteurellosis - *Pasteurella multocida*
- Diseases due to *Escherichia coli*
- Diseases due to Micrococcus

**PART-II-FUNGAL DISEASES**

- Aspergillosis- *Aspergillus fumigatus*
DISEASES OF DUCKS

PART-I- BACTERIAL DISEASES

- Diseases due to *Escherichia coli*
- New Duck disease/Infectious polyserositis/*Riemerella anatipestifer*
- Duck Pasteurellosis- *Pasteurella multocida*
- Pasteurellosis in flying ducks- *Pasteurella multocida*
- Tuberculosis-*Mycobacterium avium*

PART-II-FUNGAL DISEASES

- Aspergillosis-Aspergillus *species*

DISEASES OF EMU

PART-I- BACTERIAL DISEASES

- Yersiniosis-*Yersinia enterocolitica*
- *Escherichia coli* infection in Emu
- Staphylococcal infection in Emu

PART-II-FUNGAL DISEASES

- Aspergillosis-Aspergillus *fumigatus*

DISEASES OF AFRICAN LOVE BIRDS

PART-I- BACTERIAL DISEASES

- Bacterial hepatitis in African Love Birds

*Escherichia coli, Klebsiella pneumoniae, Pseudomonas*

DISEASES OF PIGEON

- *Escherichia coli* infection in pigeon

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DISEASES OF POULTRY
PART-I- Bacterial Diseases

Fowl typhoid- *Salmonella gallinarum*

Fig. 1. Coppery liver
Fig. 2. Haemorrhage in ovary

Fig. 3. Haemorrhage in oviduct
Fig. 4. Haemorrhage in intestine
DISEASES OF POULTRY

PART-I- Bacterial Diseases

Salmonella gallinarum- Cultural characteristics

Fig. 5. Colony in Mac Conkey’s agar

Fig. 6. Colony in Brilliant Green agar (BGA)

Fig. 7. Colony in Xylose Lysine Deoxycholate agar (XLD)

Fig. 8. Gram’s staining of colony- Gram negative Coccobacilli

Fig. 9. Triple Sugar Iron agar- Yellow butt and pink slant
DISEASES OF POULTRY
PART-I- Bacterial Diseases

Fowl Cholera- *Pasteurella multocida*

Fig. 1. Liver- Pinpoint necrotic foci and Heart-haemorrhages

Fig. 2. Intestine-haemorrhages

*Pasteurella multocida*-Cultural characteristics

Fig. 3. Avian *Pasteurella multocida* in heart blood smear-Giemsma staining

Fig. 4. Colony of avian *Pasteurella multocida* in blood agar
DISEASES OF POULTRY
PART-I- Bacterial Diseases
Staphylococcal infection in chicks

Fig. 1. Unabsorbed yolk material

Fig. 2. Staphylococcus aureus –Gram’s staining
DISEASES OF POULTRY
PART-I- Bacterial Diseases

Diseases due to *Escherichia coli*

*Escherichia coli*-infection in chicks

Fig. 1. Fibrinous pericarditis

Fig. 2. Fibrinous perihepatitis

Fig. 3. Liver-necrosis and haemorrhage
DISEASES OF POULTRY
PART-I- Bacterial Diseases

Diseases due to *Escherichia coli*

*Escherichia coli*-infection in chicks

Fig. 4. Heart - Fibrin deposits in pericardium

Fig. 5. Fibrin deposits covering intestine

Fig. 6. Haemorrhage - Intestine
DISEASES OF POULTRY
PART-I- Bacterial Diseases

Escherichia coli infection & tapeworm infestation

Fig. 1. Intestine - Severe tapeworm infestation

Fig. 2. Liver - Haemorrhage

Fig. 3. Viscera

Fig. 4. Kidney - Nephritis

Fig. 5. Trachea - Blood clots
DISEASES OF POULTRY
PART-I- Bacterial Diseases

Diseases due to *Escherichia coli*

*Escherichia coli*-infection in Silky fowl

Fig. 1. Cyanosis of comb and wattles

Fig. 2. Heart-haemorrhages

Fig. 3. Liver- necrosis and haemorrhage
DISEASES OF POULTRY
PART-I- Bacterial Diseases

Diseases due to *Escherichia coli*

*Escherichia coli*-infection in Silky fowl

Fig. 4. Intestine-haemorrhagic enteritis

Fig. 5. Kidney-nephritis

Fig. 6. Trachea-cyanosis

Fig. 7. Cyanosis of internal organs
DISEASES OF POULTRY
PART-I- Bacterial Diseases

Diseases due to *Escherichia coli*

*Escherichia coli*-infection in Guinea fowl

Fig. 1. Heart-fibrinous pericarditis

Fig. 2. Liver-necrosis and haemorrhage

Fig. 3. Intestine - enteritis
DISEASES OF POULTRY

PART-I: Bacterial Diseases

Diseases due to *Escherichia coli*

*Escherichia coli*-cultural characteristics

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Fig. 1. Colony in Eosin Methylen Blue (EMB) agar

Fig. 2. Gram-negative medium sized rods

Fig. 3. Citrate negative

Fig. 4. *Escherichia coli*-IMVIC reaction - indole positive

Fig. 5. *E. coli*-isolates - IMVIC reaction
   MR Positive, VP Negative, Citrate Negative
   TSI - Yellow butt and Yellow Slant
DISEASES OF POULTRY
PART-II- Viral Diseases

New Castle Disease (Ranikhet disease) in poultry

Fig. 1. Liver-Necrosis

Fig. 2. Heart and Spleen - Splenomegaly

Fig. 3. Haemorrhage in proventriculus

Fig. 4. Enteritis
DISEASES OF POULTRY
PART-II- Viral Diseases

New Castle Disease (Ranikhet disease) in Kangayam fowl

Fig. 1. Liver-Necrosis

Fig. 2. Trachea-Haemorrhage

Fig. 3. Spleen-Necrosis

Fig. 4. Haemorrhage in tip of proventricular glands

Fig. 5. Intestine-Haemorrhage
DISEASES OF POULTRY
PART-II- Viral Diseases

Infectious Bursal Disease (IBD)

Fig. 1. Haemorrhage in breast muscles

Fig. 2. Haemorrhage in bursa

Fig. 3. Haemorrhage in thigh muscles

Fig. 4. Liver and spleen

Fig. 5. Antigen detection ELISA-Positive
DISEASES OF POULTRY
PART-II- Viral Diseases

Infectious Bursal Disease (IBD)

Fig. 6. Affected Bird - Head

Fig. 7. Spleen & Kidney - Haemorrhage

Fig. 8. Bursa - Enlarged & Haemorrhagic

Fig. 9. Intestine - Serosal blood vessels - congestion
DISEASES OF POULTRY
PART-II- Viral Diseases

Infectious bronchitis - (IB) in poultry

Fig. 1. Trachea - Haemorrhage

Chick embryo inoculation

Fig. 2. Control embryo - Right, Inoculated embryo - Left
Dwarfing of inoculated embryo

Fig. 3. Dwarfing and congestion of inoculated embryo

Fig. 4. Liver of inoculated embryos

Fig. 5. Liver of inoculated embryo

Fig. 6. Chorio allantoic membranes of inoculated embryos
DISEASES OF TURKEY
PART-I- Bacterial Diseases

Pasteurellosis - Pasteurella multocida

Fig. 1. Liver-Necrotic foci
Fig. 2. Heart-pinpoint haemorrhages

Fig. 3. Spleen-Necrosis

Fig. 4. Intestine-Haemorrhages in mesentry
Fig. 5. Intestine- Mucosal haemorrhages
DISEASES OF TURKEY
PART-I- Bacterial Diseases

Pasteurellosis - Pasteurella multocida

Fig. 6. Colony in blood agar

Fig. 7. Gram’s staining-Gram negative cocco bacilli

Fig. 8. Heart blood smear-bipolar bacterium
DISEASES OF QUAILS
PART-I- Bacterial Diseases

Pasteurellosis - Pasteurella multocida

Fig. 1. Haemorrhage in liver
Fig. 2. Liver pinpoint haemorrhages

Fig. 3. Haemorrhage - Ovary
Fig. 4. Haemorrhage in serosa of proventriculus and gizzard

Fig. 5. Intestine - Haemorrhages
Fig. 6. Haemorrhage in trachea
DISEASES OF QUAILS
PART-I- Bacterial Diseases

Diseases due to*Escherichia coli*

Fig. 1. Pinpoint haemorrhages and necrosis - Liver

Fig. 2. Haemorrhage in Ovary

Fig. 3. Gizzard and proventriculus - Haemorrhage

Fig. 4. Haemorrhage in Oviduct

Fig. 5. Haemorrhagic enteritis

Fig. 6. Oviductal haemorrhage
DISEASES OF QUAILS

PART-I- Bacterial Diseases

Diseases due to Micrococcus

Fig. 1. Haemorrhages and necrosis - Liver

Fig. 2. Enteritis

Fig. 3. Colony of bacteria in nutrient agar

Fig. 4. Gram’s staining - Gram positive cocci
**DISEASES OF QUAILS**

PART-II- Fungal Diseases

*Aspergillus* - *Aspergillus fumigatus*

Fig. 1. Nodules in lungs

Fig. 2. Growth of fungus in nodules in lungs

Fig. 3. Fungal colony in SDA - 3 to 4 days

Fig. 4. Fungal colony in SDA - 7 to 8 days

Fig. 5. Microscopic morphology of *Aspergillus sp*
DISEASES OF DUCKS
PART-I- Bacterial Diseases

Diseases due to *Escherichia coli*

Fig. 1. Fibrinous pericarditis

Fig. 2. Fibrinous pericarditis and perihepatitis

Fig. 3. Haemorrhage in liver

Fig. 2. Liver - fibrin deposits
DISEASES OF DUCKS
PART-I- Bacterial Diseases

Diseases due to - *Escherichia coli*

Fig. 1. Affected Bird - Carcass

Fig. 2. Liver - Haemorrhage

Fig. 3. Lesions in footpad

Fig. 4. Liver, Spleen & Heart
DISEASES OF DUCKS
PART I - Bacterial Diseases

New Duck Disease - *Riemerella anatipestifer*

**Fig. 1.** Incordination and nervous signs affected ducklings

**Fig. 2.** Fibrinous pericarditis

**Fig. 3.** Necrosis of liver

**Fig. 4.** Liver - hepatitis

**Fig. 5.** Fibrinous polyserositis

**Fig. 6.** Intestine and pancreas
DISEASES OF DUCKS
PART-I- Bacterial Diseases

Pasteurellosis - Pasteurella multocida

Fig. 1. Heart - pinpoint haemorrhages

Fig. 2. Liver - Pin point necrotic foci

Fig. 3. Liver - pinpoint necrotic foci

Fig. 4. Trachea and lungs - Haemorrhage

Fig. 5. Intestine - Enteritis and haemorrhages

Fig. 6. Pinpoint haemorrhages in intestinal mucosa
DISEASES OF DUCKS
PART-I- Bacterial Diseases

Pasteurellosis - Pasteurella multocida

Fig. 7. Petechial haemorrhages - air sacs
Fig. 8. Petechial haemorrhages - heart and airsacs

Fig. 9. Haemorrhages - serosa
Fig. 10. Petechial haemorrhages - mesentry
DISEASES OF FLYING DUCKS
PART-I- Bacterial Diseases

Pasteurellosis - Pasteurella multocida

Fig. 1. Liver - pinpoint necrotic foci and haemorrhages

Fig. 2. Heart - petechial haemorrhages
DISEASES OF DUCKS
PART-I- Bacterial Diseases

Tuberculosis - *Mycobacterium avium*

Fig. 1. Duck - infected with avian tuberculosis

Fig. 2. Emaciated breast muscles

Fig. 3. Nodules in gastrointestinal system

Fig. 4. Nodules associated with GI system

Fig. 5. Lungs

Fig. 6. Acid fast bacilli - Nodule impression smear
DISEASES OF DUCKS
PART-II- Fungal Diseases

Aspergillosis - *Aspergillus species*

Fig. 1. Liver

Fig. 2. Lungs with nodules

Fig. 3. Nodules in lungs and air sacs

Fig. 4. Fungal culture in SDA

Fig. 5. Lactophenol cotton blue staining fungal culture

Fig. 6. Conidiophore vesicle *aspergillus species* - LPCB
DISEASES OF EMU
PART-I- Bacterial Diseases

Yersiniosis - *Yersinia enterocolitica*

Fig. 1. Haemorrhages - Liver

Fig. 2. Heart - haemorrhages

Fig. 3. Trachea - haemorrhages

Fig. 4. Proventriculus and gizzard - haemorrhages

Fig. 5. Intestine - haemorrhagic enteritis

Fig. 6. Greenish and watery diarrhoea
DISEASES OF EMU
PART-I- Bacterial Diseases

Yersiniosis - *Yersinia enterocolitica*

Fig. 1. Bipolar bacterium in heart blood smear-Giemsa staining

Fig. 2. Bipolar bacterium

Fig. 3. Gram's staining of liver impression smear rod shaped bacterium

Fig. 4. Gram negative cocco bacilli

Fig. 5. Colony in Yersinia isolation agar

Fig. 6. Antibiotic sensitivity test - MHA
DISEASES OF EMU
PART-I- Bacterial Diseases

Escherichia coli infection

Fig. 1. Liver - haemorrhage and necrosis

Fig. 2. Mesenteric blood vessels - congested

Fig. 3. Kidney - nephritis

Fig. 4. Intestinal mucosa - haemorrhage
DISEASES OF EMU
PART-I- Bacterial Diseases

Staphylococcal infection

Fig. 1. Liver - pinpoint haemorrhages
Fig. 2. Trachea
Fig. 3. Kidney
Fig. 4. Esophagus
Fig. 5. Intestine
Fig. 6. Enteritis
DISEASES OF EMU
PART-II- Fungal Diseases

Aspergillosis

Fig. 1. Liver - Necrosis
Fig. 2. Nodules in lungs
Fig. 3. Nodules in lungs and air sacs
Fig. 4. Intestine and mesentry
Fig. 5. Meningeal blood vessels
DISEASES OF EMU
PART-II- Fungal Diseases

Aspergillosis - *Aspergillus fumigatus*

Fig. 1. *Aspergillus fumigatus* colony in SDA - 3 days

Fig. 2. *Aspergillus fumigatus* colony in SDA - 5 days

Fig. 3. *Aspergillus fumigatus* colony in SDA - 7 days

Fig. 4. Reverse of fungal colony in SDA

Fig. 5. *Aspergillus fumigatus* in lacto phenol cotton blue staining
DISEASES OF EMU
PART-II- Fungal Diseases

Aspergillosis - Histopathology

Fig. 1. PAS staining of fungal hyphae in nodules of lungs and air sacs

Fig. 2. PAS staining - fungal hyphae

Fig. 3. Micro abscess formation - Nodule

Fig. 4. H&E staining-spleen showing hyperplastic lymphoid follicles and diffuse areas of necrosis

Fig. 5. H & E staining of liver tissue showing sinusoidal congestion
DISEASES OF AFRICAN LOVE BIRDS
PART-I- Bacterial Diseases

Bacterial hepatitis
Escherichia coli, Klebsiella pneumoniae & Pseudomonas

Fig. 1. Prominent keel bones
Fig. 2. Visceral organs

Fig. 3. Liver and spleen
Fig. 4. Enteritis

Fig. 5. Gram negative medium sized rods - E coli
Fig. 6. Liver - Histopathology
DISEASES OF AFRICAN LOVE BIRDS
PART I- Bacterial Diseases

Bacterial hepatitis
*Escherichia coli, Klebsiella pneumoniae & Pseudomonas*

Fig. 7. Lymphocytic collection in lung
Fig. 8. Vacuolated cytoplasm - Liver

Fig. 9. Vacuolated cytoplasm and lymphocytic collection-hepatocytes
DISEASES OF PIGEON
PART-I- Bacterial Diseases

*Escherichia coli* - septicaemia

Fig. 1. Liver - Haemorrhage & Necrosis

Fig. 2. Lungs - Haemorrhage

Fig. 3. Blood clots in esophagus

Fig. 4. Congestion - mucosa of neck

Fig. 5. Intestine - Haemorrhagic enteritis

Fig. 6. Intestine - enteritis
DISEASES OF PIGEON
PART-I- Bacterial Diseases

*Escherichia coli* - septicaemia

Fig. 7. Liver - Impression smear - Giemsa staining medium sized rods

Fig. 8. ABST - Isolate highly resistant to antibiotics

Fig. 9. Histopathology - Liver - H & E staining - focal hepatitis

Fig. 10. Liver - focal hepatitis

Fig. 11. Liver - H & E - sinusoidal congestion and dilatation
COLOR HAND BOOK OF COMMON DISEASES
AFFECTING POULTRY IN KERALA

Research & Development Project
“Micro organisms associated with mortality or low egg production in domestic poultry”

Published by
Department of Animal Husbandry, Kerala
Dr. Suniltha Karunakaran, working as Veterinary Surgeon, Veterinary Clinical Laboratory in District Veterinary Centre, Palakkad. She has acquired BVSC & AH (2001) from the College of Veterinary and Animal Sciences, Kerala Agricultural University, Mannuthy, Thrissur and completed MVSC in Veterinary Microbiology (2002-2004) from College of Veterinary and Animal Sciences, Mannuthy. Joined Animal Husbandry Department as Veterinary Surgeon, CFSP, Palakkad in 2005 and later joined as Veterinary Surgeon, Clinical Laboratory, DVC, Palakkad in 2006. Completed one Research and Development Project titled “Micro organisms associated with mortality/low egg production in domestic poultry” for a total financial outlay of rupees 3.68 lakhs funded by Department of Animal Husbandry, Kerala - 2008 to 2012 and one project for Improving diagnostic facilities of District Veterinary Centre, Palakkad under Backward Region Grant Fund (BRGF) scheme funded by District Panchayath, Palakkad for a total financial outlay of rupees twenty lakhs during 2010-2012. She has 41 research articles to her credit.