

Poultry Diseases



Dr. Santosh Marandi
Dept. of Livestock Production Management

Bacterial diseases

Fowl Cholera

Pasteurella multocida

- Common in adult laying flock.
- Spread through contaminated feed and water.
- Swelling of ear lobe/sinus.
- Swollen wattle with cheesy exudate.
- Ruffled feathers, bluish comb and wattle.
- Difficulty in breathing.

Chronic Fowl cholera

Swelling of Tendon sheath,
Joint, Foot pad



Tortticulus



Treatment

- Enrofloxacin in water
- Inj. Gentamycine in severe cases
- Strict biosecurity
- Rodent control
- Vaccination

Bacterial diseases

Infectious Coryza

Haemophilus paragallinarum

- Common in all ages
- Severe in older birds
- Spread through nasal discharges
- Contaminated nipple /drinkers
- Air borne or direct contact.
- Sneezing, discharge in eyes, nose.
- Swollen face and wattles
- Marked conjunctivitis.
- Difficulty in breathing.



Treatment

- Enrofloxacin in water
- Sulfa drugs.
- Vaccination

Bacterial diseases

Pullorum disease

Salmonella pullorum

- Bacillary white diarrhea.
- Affects chicks upto 3-4 weeks.
- Transmitted vertically by eggs.
- Dead in shell eggs in hatchery.
- Pasty vent and white diarrhea.
- Stunted and poor feathering.

Treatment

- Parent screening.
- Reacting birds culled.
- Disinfection in hatchery between hatches.
- Environmental monitoring by plate exposure test.

Fowl Typhoid

Salmonella gallinarum

- Common in grower and adult birds.
- Transmitted by transovarian or orally through faeces.
- By carrier hen.
- Shrunken combs, ruffled feathers.
- Low egg production
- Diarrhea.

Treatment

- Procurement of chicks from Salmonella free parents.

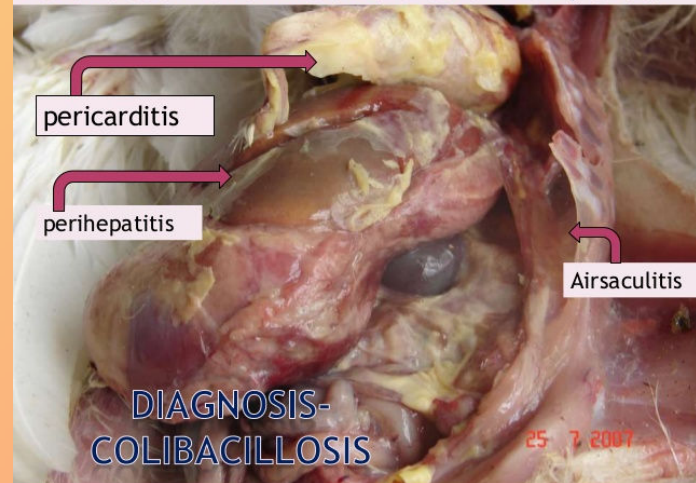
Bacterial diseases

Colibacillosis

Escherichia coli

- Normal residents of intestine in chickens.
- Pathogen and immune suppressive.
- Transmitted by contaminated feed, water, hatching eggs.
- Inhalation and via fomites.
- Distended abdomen,
- Tendency to huddle.
- Ruffled feathers
- Diarrhea, pasty vents.
- Drop in egg production.

PICTURE: COURTESY OF PROF. DR. MASUDUZZAMAN, CVASU.



Treatment

- Antibiotics in feed and water for 3-5 days.
- Good hygiene practices.
- Good brooding conditions.

Viral diseases

Marek's Disease

Herpes virus

- Growers affected at 12-16 weeks.
- Mortality upto 40 weeks.
- Occurs throughout year. But common in summer.
- Air borne. Inhalation.
- Contaminated feather follicles.
- Spastic paralysis with one leg stretched forward and other retracted.
- Lateral twisting of neck.
- Severe weight loss, diarrhea.



Treatment

- Day old vaccination at hatchery.
- Biosecurity measures.
- Use of genetic resistant strains.

Viral diseases

Ranikhet disease / New Castle disease

Paramyxovirus and others

- All ages affected.
- Occurs throughout year. But common in summer.
- Air borne.
- Spread through contaminated feed and water.
- Direct contact.
- Swelling of face
- Greenish diarrhea.
- Twisting of neck, leg paralysis.
- Difficulty in breathing.
- Shell less or soft shelled eggs.



Treatment

- Vaccination.
- Check HI titres periodically in flock.
- Proper hygiene and Biosecurity measures.

Viral diseases

Infectious Bronchitis

Corona virus

- Affects all ages.
- Common in chicks.
- Air borne inhalation.
- People and equipments.
- Carrier birds.
- Gasping in chicks.
- Ruffled feathers.
- Dyspnoea in adult.
- Misshapen eggs.



Treatment

- Vaccination.
- Proper hygiene and good management practices.

Viral diseases

Avian Influenza

Orthomyxo virus

- Water fowls are natural reservoir of virus.
- Transmitted by contaminated faecal and oculo nasal discharges.
- Mechanically by insects, rodents and fomites.
- Congestion, cyanosis of comb, wattle. Diffuse acute haemorrhages, edema in legs.
- Mucosal haemorrhage, edema of cloaca.
- Open mouth breathing.



Treatment

- Depopulation of the infected flock.
- Cleaning and disinfection of all buildings.
- Composting of infected manure.
- Hygiene and good bio security measures.

Mycoplasma Disease

Chronic Respiratory Disease

Mycoplasma gallisepticum

- Chicks of all ages affected.
- Spread through infected hatching eggs and carrier birds.
- Air borne by contaminated dust, feathers.
- Severe depression.
- Abnormal respiratory sounds.
- Coughing, sneezing, kerato conjunctivitis.
- In adult birds decreased egg production.



Treatment

- Tylosin in feed.
- Enrofloxacin in water.
- Serological monitoring of breeders
- Culling of infected birds.
- Good hatching procedures.

Parasitic Disease

Coccidiosis

Eimeria species

- Chicks about 4 weeks are susceptible.
- Anorexia
- Bloody diarrhea.
- Huddling
- Anemia
- High mortality.
- Balloning of caecum with fresh or clotted blood.



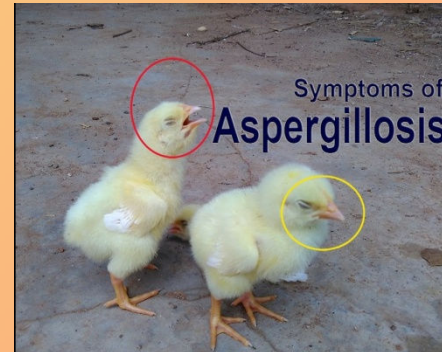
Treatment

- Use of coccidiostat in feed/water.
- Vaccination.
- Housing of birds in wired floored or slated pens.
- Litter management.
- Avoid over crowding.

Aspergillosis / Brooders pneumonia

Aspergillus fumigatus

- Common in young chicks upto 40 days of age.
- Spread through contaminated feed and water ingestion.
- Cold stress, dusty environment pre dispose.
- Gasping or laboured open mouth breathing.



Treatment

- Good management practices.
- use of dry and good quality litter.
- Balanced nutrition to chicks.

Aflatoxicosis / Mycotoxicosis

Aspergillus flavus

- Aflatoxin, Ochratoxins.
- Ingestion of toxin, contaminated feed.
- Paralysis and lying down.
- Retarded growth .
- Ruffled feathers.
- Drooping wings.



Treatment

- Use of toxin binders in feed.
- Proper storage of feed in cool dry place.
- Frequent raking of litter.

Metabolic Disease

- Common in growers and broilers.
- Rapid growth rate.
- Poor ventilation, Overcrowding.
- High energy diets.
- Faulty brooding, Exposure to cold.
- Ammonia formation and dust.
- Sodium toxicity.
- Vit. E / Selenium toxicity.
- Mycotoxicosis.
- Stress.
- Abdominal distension, pale head, shrunken comb
- Bird reluctant to move.
- Difficult breathing, panting.
- Ruffled feathers.

Ascites

Treatment

- Feed Restriction.
- Low energy diet.
- Adequate ventilation.
- Avoid exposure to cold.
- Minimize toxin contamination of feed
- Increase Vit E and Selenium.

Miscellaneous

1. Cage layer fatigue
 - a. Nutritional and management problem
 - b. Ca, P and Vit D3
2. Egg bound
 - a. Young pullets
 - b. Inflammation
 - c. Partial paralysis
 - d. Lighting pattern
 - e. Lubrication and Manual help
3. Breast and admonen blisters
 - a. Overweight
 - b. Nutritional deficiency
 - c. Improper cage

Vices

1. Cannibalism

- a. All age group
- b. Overcrowding
- c. Lack of feeding and watering space
- d. Unbalanced feed
- e. Too bright light
- f. Irritation due to parasitic infestation

2. Pica

3. Egg eating

4. Egg hiding

Disease Spread Through

1. Egg Transmission (Embryonic)

- a. Adeno virus
- b. Avian encephalomyelitis
- c. Chronic respiratory disease
- d. Egg drop syndrome
- e. Lymphoid leucosis
- f. Sinovitis
- g. Pullorum typhoid
- h. Salmonellosis
- i. Viral arthritis

1. Premises contamination

- a. Gumboro disease
- b. Marek's disease
- c. Coccidiosis
- d. Salmonellosis
- e. Coliform organism
- f. Staphylococci

2. Hatchery dissemination

- a. Aspergillosis
- b. Omphalitis
- c. Staphylococcosis

3. Respiratory or air borne

- a. Avian Influenza
- b. Chronic respiratory disease
- c. Infectious bronchitis
- d. Laryngotracheitis
- e. Mycoplasma synoviae
- f. Newcastle disease

Poultry diseases prevention

1. Complete separation of breeder, hatchery, broiler and commercial egg operation.
2. By practicing all-in, all-out production and depopulation.
3. Avoiding transfer of birds from one commercial operation to another.
4. Control movement of persons and equipments.
5. Immunity development in birds through vaccination.
6. Sanitation maintenance of surroundings.
7. Disinfection of the house to destroy causative organisms.

Vaccination schedule

Commercial Broiler

Sl. No.	Age (day/s)	Name of Vaccine	Dose	Route
1	1	Marek's disease	0.2 ml	Sub-cutaneous
2	7	New Castle disease (Lasota)	1 drop	Oculonasal
3	15	Infectious Bursal Disease (Intermediate)	1 drop	Oculonasal
4	28	New Castle disease (Lasota) Booster	1 drop	Oculonasal

Vaccination schedule

Commercial Layer

Sl. No.	Age (day/s)	Name of Vaccine	Dose	Route
1	1	Marek's disease	0.2 ml	Subcutaneous at the neck region
2	5-7	New Castle disease (F1 or Lasota)	1-2 drop	Intranasal/ Intraocular
3	14 -15	IBD/ Gumboro	1-2 drop	--do--
4	21-22	New Castle disease (Lasota Booster)	1-2 drop	--do--
5	35	Infectious Bursal Disease	1-2 drop	--do--
6	42	Fowl pox	2 pricks 0.2ml S/C	Wing-web puncture by prick method or Feather follicle method
7	56	New Castle disease (Lasota Booster)	0.5 ml I/M	Subcutaneous in wing
8	112	--do--	--do--	--do--

Vaccination schedule

Indigenous Rural Poultry

Sl. No.	Age (day/s)	Name of Vaccine	Dose	Route
1	1	Marek's disease	0.2 ml	Subcutaneous at the neck region
2	5-7	New Castle disease (F1 or Lasota)	1-2 drop	Intranasal/ Intraocular
3	14 -15	IBD/ Gumboro	1-2 drop	--do--
4	21	Fowl pox	2 pricks 0.2ml S/C	Wing-web puncture by prick method or Feather follicle method
5	28	New Castle disease (Lasota Booster)	1-2 drop	--do--
6	35	Infectious Bursal Disease	1-2 drop	--do--
7	56	New Castle disease (Lasota Booster)	0.5 ml I/M	Subcutaneous in wing
8	84	Fowl pox	0.2 ml	S/C

Thank you.....