



## MANAGEMENT OF POULTRY DURING MONSOON



- Seasonal reversal of winds-  
Monsoon
- Two monsoons: SW (summer) and  
NE (winter)
- SW monsoon: June to September  
and NE monsoon: October to  
November

State	Monsoon	Time
TG and KN	SW	June to September
TN	NE	October to November
KL	SW and NE	June to November
AP	SW and NE	June to November



# Temperature in SW monsoon

- Fall in temperature (3-6°C)
- Temperature is less uniform in rainy season
- Temperature in September raises as the SW monsoon ceases.
- There is raise in temperature whenever there is break in the monsoons.
- During SW monsoons, coastal areas of TN and AP receives little high temperatures (above 30 °C).



- Overall, during monsoon the temperature drops to ambient to cold and humidity increase.
- The low temperatures and high humidity make conditions very favorable for growth of disease causing pathogens and parasites.
- Hence, poultry farming becomes challenging during rainy seasons.



# Management

- 1) Farm/shed management
- 2) Water Management
- 3) Feed/feeder Management
- 4) Litter Management

# Farm/shed management

- Repair if any holes in the roof
- There should be sufficient roof hangings on the sides (min. 5 feet).
- There **should not be water logging** around the shed other wise it will create breeding ground for vector. So Efficient water drainage must be there.
- The floor should be repair well and kept dry
- Prepare side curtains to keep rain from entering the shed.
- Take special precautions to protect the feeder from rainfall due to high wind gusts.





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- Control rodent population: usage of rodenticide (zinc phosphide/warfarin) and clearing the bush surrounding shed.
  - Cleaning of dirty bulbs and good lighting management (otherwise, delayed onset of production in layers).



e 4. Dirty (left) and clean bulbs (right)



- Use enough fans to ensure the shed is well ventilated
- A speed of 3.5m/s air speed

# Brooding

- Rainwater splashing inside and high humidity with poor ventilation can increase the ammonia level inside the shed.
- Allow a 1–2 foot opening at the top of side curtains during the day to ventilate ammonia, smoke and other undesirable gases out.
- Don't use soaked coal in rain as it releases more smoke.



## POSITION OF CURTAINS TO CONTROL TEMPERATURE DURING BROODING PERIOD

I



COOL



SLIGHTLY COOL



MODERATE



HOT

II



COOL



SLIGHTLY COOL



MODERATE



HOT

# Feed/Feeder/Feeding Management

- Store enough food for the rainy seasons and try to avoid shortage and transportation of feed in rainy days.
- Storage of feed: on wooden platform/ elevated concrete platform.
- Storage platform should be one foot distance from the floor and the walls and should be dry always.
- If humidity in storage room is high/ water leakage is there: fungal growth on RM/feed.



# Nutritional Management

- Poultry needs a high-energy diet during this period to keep their body warm.
- Rich energy source such as carbohydrates and fats could be helpful to meet their energy requirement and increase heat increment in body.
- $\text{CuSO}_4$  and acidifiers in feed helpful.

# Feeders

- High relative humidity and direct exposure of the feeder to rainwater will lead to caking of feed and finally lead to the formation of mycotoxins.
- Remove old and caked feed from the feeder regularly.
- Regular complete cleaning of the feeder is recommended.
- Avoid leaving excess feed in the feeder.
- Inclusion of toxin binders in the feed is highly recommended, especially during this season.



# Feed Mill Management/Hygiene in layer Farms

- Storage of raw material on wooden pallets.
- Leave space of 2-3 feet from the walls to avoid contact of RM bags to walls.
- Repair if there are any leakages in roof of RM godown.
- Use of disinfectant/ larvicidal spray on the outside of feed mill to reduce pathogen and flies' population.
- Feed mill line flushing with DORB(1000kg)+Acidifier(Salcurb/Formycine gold)100 kg mix to maintain hygiene.

# Water Management

- In rainy season ponds, rivers, taps even tube wells water can be infected by rain water through the soil and the natural ways.
- Rainwater entering the manure pit should be strictly controlled or entirely prevented.
- High moisture levels in the manure allow for germination of spores, multiplication of vectors (flies, insects), and promote other pathogen growth.
- Contaminated rainwater may contaminate borewells and nearby water bodies.





- Waterers should not be filled to their full capacity because it can cause spillage and wet the litter.
- The height of the waterer should be equal to the back of the bird.
- Water should not be cold (20-22<sup>o</sup> C for drinking water).
- Regular usage of water sanitizers and acidifiers are must.
- Clean pipelines thoroughly, as this will help in reducing the biofilm levels inside the line, which are a source of contamination.

## How to do pipeline cleaning?

- With  $\text{H}_2\text{O}_2$  @ 10-20 ml/litre water.
- All pipelines and half tank of water need to be filled and  $\text{H}_2\text{O}_2$  added.
- 6 hours in layer sheds and 1 hour in broiler shed (switch off lights during night)
- Flush 3 or 4 times until water smells free of  $\text{H}_2\text{O}_2$

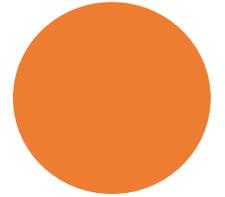
# Litter Management

Common litter material:

Paddy husk, coffee seed husk, coconut fiber, wood shavings, cut sugar cane bagasse, hulls of cotton seed, soyabean and sunflower seed, crushed maize cobs, maize bran, chopped straw or chaff, dried leaves and grass.

- Depth of the litter material should be min 5 cm.
- Ideal moisture content of the litter should be between 25% and 30%.

- If the moisture content in litter is 20% - the litter becomes too dusty
- If the moisture in the litter is 40% - litter gets wet and caked up – Ammonia content may reach more than 20 ppm inside shed.
- Once the litter moisture exceeds 30% its cushioning, insulating, and water holding capacity is compromised and manure becomes wet.





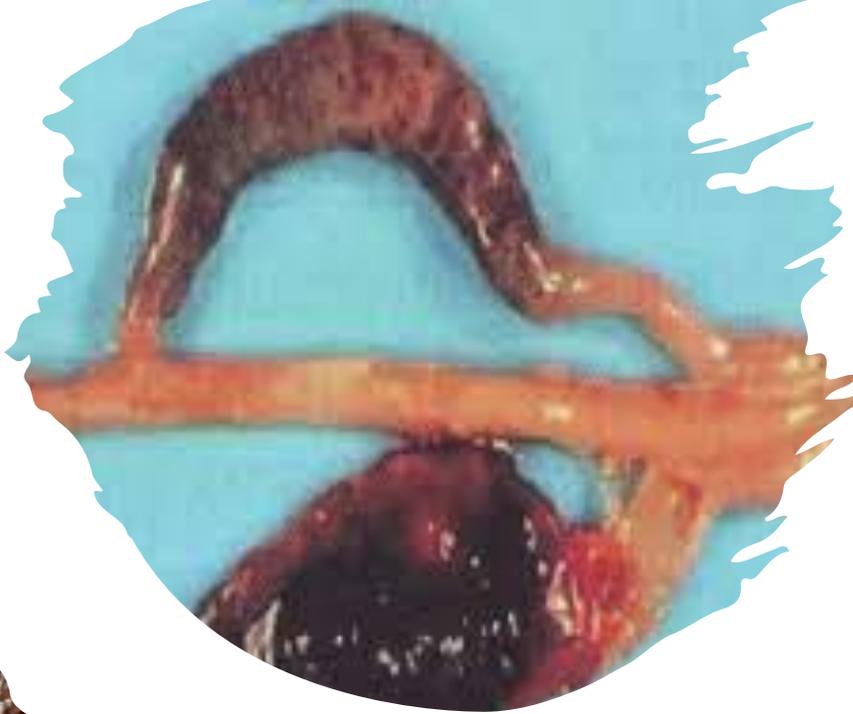
## Effects of wet litter/bedding on birds

- Breast blisters
- Sores on the foot pads
- Favorable environment for bacteria and coccidian oocysts growth
- Ammonia irritates eyes and respiratory tract, leads to respiratory infections.



Effects of wet litter in broilers

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**Coccidiosis**

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## **Back infestation**



- Mud balls on foot pad: Effect the posture of walking and may lead toe breakage and lameness.
- In layer farms: wet manure with larva in absence of a bottom mesh will attract wild bird and may lead to potential disease outbreaks.





## Good Litter Management Practices

- Raking of litter daily
- Avoid nipple leakage or overflow of drinkers
- Remove wet litter and replace with fresh bedding material
- Hydrated lime at 7 to 11 kg or super phosphate 7 kg per 100 sq.ft. floor space may be added into litter by stirring.
- Very little ammonia will be released when litter is kept below a pH of 7.0, but is rapid at a pH of 8.0 or above.
- Phosphoric acid (1.9l/10.5ft<sup>2</sup>) and super phosphate (1.09kg/10.5ft<sup>2</sup>) are effective in controlling ammonia fumes of the litter.

- Usage of disinfectant/germicidal/larvicide sprays on litter to control bacterial growth and flies' population.
- Feces make an important role in contamination of diseases. So, after a certain period feces will have to remove from litter in layer farms.

“Litter should be dry and cake free”



## Moulting

- Moulting occurs during the rainy season –This phenomenon takes place at shorter days and cooler temperatures.
- During this period also provide feed as per its age only. Don't compromise on feeding.

# Disease outbreaks during monsoon

Most common disease outbreaks during rainy season		
Viral Diseases	Bacterial Diseases	Others
Fowl pox	Salmonellosis	Mycotoxycosis
Gumboro	E. coli infection	Coccidiosis
Newcastle	Fowl cholera	Round and tapeworm infestation
Avian Influenza	Chronic respiratory disease complex	Monsoon breaks bring heat stress
	Gangrenous dermatitis	
	Clostridial enteritis	
	Infectious coryza	

FIELD CASE STUDY



**Fowl Pox**

# ND/RD

Prevention by  
vaccination and strict  
biosecurity measures



# IBD/Gumboro



Prevention by  
vaccinations and strict  
biosecurity measures.



# Bacterial diseases and prevention

- **Salmonella** and **E.Coli** can be controlled by regular water sanitation and maintaining hygiene.
- Please take care of contamination of water sources with litter/ rainy water with litter material.
- **Fowl Cholera** can be prevented by controlling rat population at farm and by vaccinations.
- **CRD** can be controlled by using tylosin or tylvalosin in feed/water.
- Don't use tiamulin in broiler farms.
- **Coryza** can be prevented by proper vaccinations and regular disinfection of shed.
- **Gangrenous dermatitis**: please ensure sufficient space for layer grower(60 sq.inch/bird).

# Brooder Pneumonia



**Copper sulphate @ 0.5 gm/litre drinking water for 3-4 days would help**



- **Tape worms/roundworms:** deworming is necessary in deep litter
- Mebendazole: for round worms 20 mg/kg b.wt and for tapeworms 30 mg/kg b.wt in drinking water.
- Piperazine only acts against round worms (50- 100 mg/kg b.wt based on age)



**Tapeworm**



**Roundworm**

# Water Sanitizers and Acidifiers



<b>Sanitizers</b>	
<b>Trade name</b>	<b>Dosage</b>
Cleantab/Innoclean	1 Tab/500 litre water
Sokrena/Zysept/safeguard/Aquamax	1ml/10 litre water
BVC102	1 tab/1000 litre water
<b>Acidifiers</b>	
Acify/Acidlac/selkoPH/H+	1ml/5-10 litre water

# Disinfectants

Composition	Trade names	Dosage	application
Triple salts	Virkon-S/Biobuster plus/Viracid-S	5 gram/litre water	Spray for 10 sq.metre
Glutaraldehyde	Kohrisolin-TH	5 ml/litre water	Spray for 10 sq.metre
Quaternary ammonium compounds	Q4All	5 ml/litre water	Spray for 20-30 sq.metre

## Phenols are effective against virus, bacteria and cocci oocyst

Composition	Trade names	Dosage	application	
Para chloro meta cresol and clorophene	Prophyl 75	4 ml/litre water	1 litre spray for 100 sq.feet	In presence of birds
Para chloro meta cresol and clorophene	Prophyl 75	20 ml/litre water	1 litre spray for 25 sq.feet	In absence of birds

