



## Poultry Litter Management during Rainy Season

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Now southwest monsoon rain is pouring in southern states of our country. Every year from July to September southwest monsoon and from October to December northeast monsoon we are getting the rains. Because of the rains getting from monsoon, the poultry farmers getting disease problems. The litter and manure management become the key thing in commercial chicken rearing. The most important job in commercial poultry operations is the proper management of litter.

### Litter management

Litter is where the chickens spend all their life, in deep litter system, from the time they are housed until they are sold to the consumers. Paddy husk, saw dust, coir pith, fallen leaves and wood shavings are commonly used litter materials in poultry farming.

The qualities of good quality litter are as follows:

- The litter should be highly absorbent,
- Light in weight with medium or small particle size and dry rapidly,
- Have least tendency to form cakes,
- It should absorb effectively moisture, dilute the concentration of droppings,
- It must be free from mould growth,
- Help insulate floor from the ground moisture and
- Create a stimulus in the birds to scratch and dust bathe.

### Condition of the litter

Normally the ideal moisture content of the litter should be 25%. If the moisture contents falls to 20%, the litter becomes too dusty, not good and if the moisture goes up to 40%, the litter gets wet and caked up, not good at all. Ammonia build-up is high in a wet and caked up litter. the permissible level of ammonia level in the litter is 20 ppm only. Ammonia irritates the eyes and by inhalation it damages the inner lining of the respiratory track of the birds exposing them to infections. If the litter is too dry, the air becomes quite dusty and the respiratory system gets irritated and then easily invaded by microbes, in the process, the resistance against respiratory diseases goes down tremendously.

### Managing litter

The litter thickness of 3 cm during summer and 5 cm during winter is recommended. The final litter size should be 10-12 cm depending on the season and growing period. Waterers should not be filled to their full capacity because it can cause spoilage and wet the litter. The height of the waterer should be equal to the back of the bird. If the litter is wet, it should be removed immediately and replaced with fresh litter.

The properly maintained litter must be friable and it will not form cakes. The moisture level in a used litter should be 20%. If the moisture level is more than 25%, this could lead to high ammonia level in the poultry house and in due course lead to other respiratory disease problems. The moisture level in fresh litter material should not exceed 10%. Hence, the litter material should be neither too dry nor too wet. To examine this, take a sample of litter on the hand, press it harder in the palm and gently spread the fingers. If the litter condition is optional, the compressed litter

material shows crevices and gently falls apart. If the litter is too wet, it will form a cohesive ball. If the litter is too dry, it will form no impression, it will crumble easily and fall apart.

High moisture in litter is very problematic, resulting in caking or forming a non-absorbent crust. Caking especially occurs under waterers or other high impact areas. Wet litter causes breast blisters and sores on the foot pads and hocks of the birds. It also provides conducive environment for pathogens and parasites such as coccidian to grow well. In wet litter, uric acid is converted by bacteria to ammonia. Ammonia is a toxic gas that can damage the respiratory system of the birds and make them susceptible to infections.

### Disposing litter

Care should be taken to remove and dispose the litter after the grow-out so that the biosecurity precautions are observed strictly.

After removal from the house, manure and litter can be spread on agricultural fields. In many areas, the poultry manure contains valuable nutrients like Nitrogen, Phosphorus and potassium to the soil. Poultry manure has 3.84 per cent nitrogen, 2 percent phosphorus and 1.42 percent potassium on dry matter basis. Practically, the amount of manure is equal to the amount of feed provided to the birds. Composting the litter adds further value to the manure because compost is an excellent soil amendment. More carbon material usually needs to be added to increase the carbon to nitrogen ratio. During composting, ammonia is released to the atmosphere, which lowers nitrogen in the final product.

### Factors influencing the litter quality

- Insufficient litter material
- Insufficient ventilation
- Overcrowding
- Side walls of the poultry house too high
- Leaky waterers
- High water consumption by the birds

- Poor litter management
- Pellet feeding increase the water intake and thereby cause wet litter condition
- Excess salt in feed or water
- Excess levels of fibre in the feed
- Opening the foggers to cool the house during summer will increase the humidity and wet litter condition.

Hence, the poultry farmers of our country are requested to take utmost care of the litter management in the poultry house in the coming months.

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