



Deep Litter System in Poultry Production



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Introduction:

In deep litter system, the poultry birds are kept inside the house all the time. Arrangement of feed, water and nest are made inside the house. The birds are kept on suitable litter material of about 3'' to 5'' depth. The word litter is used for fresh litter material spread on the floor. Usually paddy husk, saw dust, ground nut hulls, chopped paddy straw or wood shavings are used as litter materials. This arrangement saves labour involved in frequent cleaning of facial matter (droppings), however it needs periodical stirring. The litter is spread on the floor in layers of 2'' height every fortnightly till the required is achieved.

Points to be considered while adopting deep litter system

1. The deep litter system should always keep dry.
2. Only right numbers of birds should be housed
3. The house should be well ventilated
4. The litter should be stirred at least once in a week-wet litter if any

should be replaced immediately with new dry litter and birds must be fed a balanced ratio.

5. The time starting deep litter system should be in the dry period of the year as it allows sufficient time (At least two months) for bacterial action.
6. Placing of water should be given due attention to keep litter dry.

Floor space, feeding space and watering space for chicks:

Weeks	Floor space Sq.ft./Chick	Feeding space inches/chick	Watering space inches/chick
1	0.2	1.5	0.5
2	0.2	2.0	0.7
3	0.3	2.0	0.7
4	0.4	2.5	0.8
5	0.6	2.5	0.8
6	0.8	3.0	1.0
7	0.9	3.0	1.0

(Source: Central Avian Research Institute)

House design: Poultry should be provided with a good housing which will facilitate shelter, Protection from wild animals and

bad weather condition. The housing design should be flexible and it depends on

- ✓ Functional requirement.
- ✓ The climate and environment.
- ✓ For efficient supervision
- ✓ Minimum structures to have efficiency.
- ✓ Economy in construction

Temperature requirement of chicks during different ages:

Age in weeks	Temperature under hover, at 5 cm above floor (°C)
0-1	35
0-2	32
2-3	29
3-4	26
5-5	23

Litter management: Litter materials of organic in nature such as saw dust, paddy husk, peanut shell, paddy chaff, chopped straw, etc that absorb moisture well can be used depending upon the cost and availability. Spread the litter to a depth of 5 cm on the floor before introducing chicks and build it up to a depth of 15 cm. This would require approximately 10 kg of litter material/sq. meter. Litter should be raked

thoroughly at frequent intervals of 2 times in a week during the cold and rainy season, once a week during the hot season and the day after deworming. Litter should be kept dry always. During the cold and rainy season and on the area of floor where watering utensils are placed, special attention should be paid daily to check the litter condition. If required, top-dress with fresh litter. It is desirable to use dry lime at the rate of 10 kg per 10 m³ and rake the litter.

Advantages:

- It is an economical
- Hygienic, comfortable and safe to birds
- Built up litter supplies vitamin B12 and Riboflavin to the birds
- Controls diseases and vices
- It increases the efficiency of production
- Materials such as paddy husks, saw dust, chopped straw and groundnut kernels depending upon the availability can be used as litter materials.

Disadvantages:

- Because of the direct contact between bird and litter, bacterial and parasitic disease may be a problem.
- Respiratory problems may emerge due to dust from the litter.
- The cost of litter is an additional expenditure on production cost
- Faults in ventilation can have more serious consequences than in cage system.

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