

Dear Reader,

Litter can be reused successfully with good litter treatment & proper management practices in the shed; this helps to minimize ammonia production in the farm & other ammonia related hazardous effects on the birds. LIITERON the Litter conditioner makes litter most hygienic and litter can be reused successfully with a little advanced planning, let us have a review.....

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Liiteron

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The litter conditioner

LIITERON & good poultry litter management practices will enable to keep birds healthy.

In deep litter poultry farms proper management of litter is of critical importance. Ammonia the gaseous pollutant in the farm originates from the breakdown of uric acid in the litter, which causes significant losses to poultry farmers. Studies show that high levels of ammonia will result in 5-10% birds with stunted growth.

Litter harbours antibiotic resistant bacteria:

Many pathogens have long survival after excretion, e.g., *Salmonella*, *E.coli*, *Campylobacter* they become available in the environment to birds, grazing livestock, human beings, wildlife and can also contaminate crops.

Organism Optimum pH for growth

<i>E.coli</i>	6.0-8.0
<i>Salmonella</i>	4.0-5.0
<i>Campylobacter</i> spp.	6.8- 7.2

Antimicrobials traceable after feeding in livestock excreta:

Antibiotics pH req. for stability

Tetracycline	} Alkaline
Tylosin	
Monensin	}

Litter acidification with LIITERON (pH 3-4.5) prevents growth of pathogens. Antibiotics also lose their efficacy at acidic pH & can save the farm getting resistant to antibiotics.

Reducing microbial load in the litter is the key for farm profits:

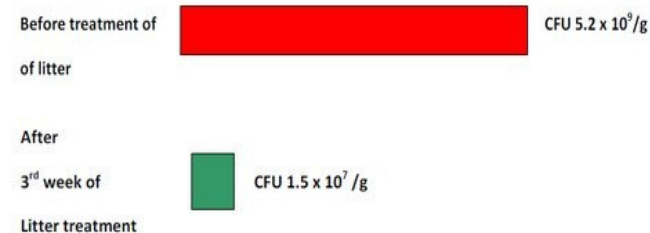
Poultry litter contains a number of pathogens that facilitates the spread of various infectious diseases such as respiratory diseases, foot-pad dermatitis, stunted growth, poor bird performance & health, from unhygienic bedding & due to reverse peristalsis of infections through cloaca.

Microbial load in the litter: (average)

Stocking density	10-12 birds/m ²	14-17 birds/m ²
<i>E.coli</i>	1.5x10 ⁴	1.2x10 ⁴
Coliform	3.1x10 ⁶	2.4x10 ⁶
Clostridium	3.1x10 ⁶	3.2x10 ⁶
Mold and Yeast	0.9x10 ⁵	1.3x10 ⁵
Staphylococci	7.5x10 ⁵	7.1x10 ⁵
<i>Salmonella</i>	3.1 x10 ⁴	3.3 x10 ⁴

LIITERON the Litter Conditioner minimizes microbial load in the litter by reducing litter pH. **LIITERON makes litter acidic, prevents growth of bacteria & other related diseases** in the farm.

Litter treated with LIITERON has reduced microbial load due to reduced pH:



Reuse litter by using LIITERON:

Poultry litter has an average pH of 8.0 - 9.0 i.e. alkaline pH. The alkaline pH influences the ammonia emissions from litter. LIITERON THE PROTON DONOR makes litter acidic. In acidic pH ammonia release from litter is reduced & most of the bacteria stops growing.

LIITERON acidification makes litter unattractive as a breeding site for flies and control darkling beetles which could be carrier of pathogens such as *Salmonella* & *Campylobacter* spp.

LIITERON treated litter is most hygienic, can be reused again & again successfully.

Recommended usage:

Spread 10kg of LIITERON per 1000sq. ft. floor space



**Let your birds Step on
Litter +Liiteron**

Love birds..Love Liiteron...