



POULTRY LITTER MANAGEMENT

for Bird Health and Performance

- A poultry flock kept on well-maintained litter is **healthier** and **more profitable**
- Poor quality litter causes **pododermatitis**, **hock burns**, and **breast blisters**; “shaky leg syndrome” in turkeys - reasons for carcass downgrades
- Rise in demand for chicken feet from China - can get premium for unmarked feet
- Requirement by law to keep litter in well maintained state



CONDITIONS ASSOCIATED WITH POOR LITTER



HOCK BURNS



PODODERMATITIS



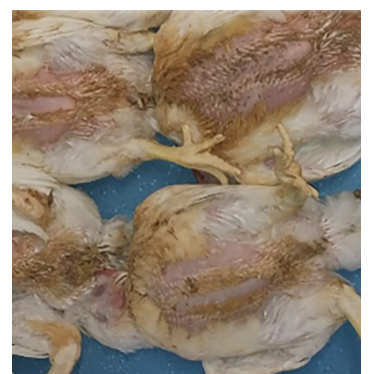
BREAST BLISTERS



Dry litter = better bird health

FACTORS AFFECTING LITTER CONDITION

1. Litter Moisture	2. Greased Litter	3. Litter Nitrogen
Key to hock burns, pododermatitis and breast blisters	Excess fat or poor-quality fat in feed increases fat excretion in faeces	Worst blisters/burns occur when litter N exceeds 5.5%
Affected by drinker design, weather, heating and ventilation, litter material and depth, stocking density, diet and bird health	High fat causes litter to lose its friability	Examine the diet for amount and quality of protein
	Examine the diet for fat	



High litter N = loss of breast feathers

Ventilation and house environment

- › Interlink **environmental temperature, ventilation rate & humidity** controls
- › Humidity affected by **number, age of birds, the relative humidity of air** drawn into the unit by the ventilation system
- › Target Humidity **50 – 70%**
- › Ventilation rate to maintain ammonia **< 25 parts per million**
- › Insulate roofs and walls to prevent condensation

Feed/Diet

- › Dietary factors that increase water consumption lead to wetter litter
- › **Sodium chloride, sodium bicarbonate, crude protein (CP) & amino acids(aa)** must not exceed optimal requirements
- › **Excess CP & aa** increase N excretion & hence severity of burns

How to control litter conditions



Stocking density

- › Max – **34 kg/m²** for broilers, no more than **7 birds /m²** for layers
- › Influences rate of evaporation of moisture

Litter material and depth

- › **Woodshavings** more absorptive than **straw**
- › Use of litter amendments – **acidifiers, alum, biochar, quicklime, hydrate lime**
- › Friable litter has bacteria that breakdown excreta & release heat **keeping the litter warm**

Drinkers

- › **The most important factor** affecting litter moisture is drinker design and management
- › Drinkers must be at correct height for the birds

