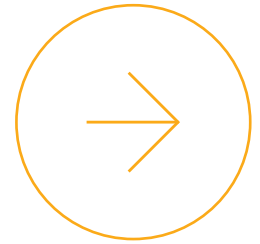


Assessing litter conditions



Many factors can affect litter condition during a grow-out, so it's important to check and record litter conditions daily. Doing this in a consistent manner and keeping records will show what the litter is doing over time and can help with management decisions. Monitoring litter may also be required for quality assurance purposes.

This fact sheet explains how to consistently assess and score litter condition, and when to take corrective action.

Sampling the litter

Visually check the litter condition in at least three sections of the shed and under the drinker lines. Samples should represent the surrounding litter conditions and be taken from:

- the fan or non-silo end of the shed
- the middle of shed
- the cool pad or silo end of the shed
- underneath drinker lines.

Pay extra attention to areas where condensation occurs (e.g. along the walls and at the cool pad end of the shed). Regular checks of the litter underneath drinker lines can help identify any drinker problems early.

In each sample area, run your foot through about half a square meter of litter. Then, using the table and definitions below, give each sample area an overall moisture and friability score.

Litter scoring

For each sample, give the litter a score of 1 to 5 based on the moisture and friability definitions provided below. Keeping a record of these scores will show what is happening to litter conditions throughout the grow-out and can be used to inform management decisions.

		Friability		
		Friable	Clumping	Caked
Moisture	Dry	1	2	3
	Moist	2	3	4
	Wet	3	4	5

Give litter a score of 1 to 5 based on the table above

Moisture

- Dry** Dry and crumbly. Does not hold together. Falls apart if squeezed (less than 25% moisture content).
- Moist** A little sticky on foot or hand. Feet leave imprints in litter when walked on but will bounce back soon after pressure has been removed. Forms a ball if squeezed, but crumbles apart easily (25-35% moisture content).
- Wet** Litter is noticeably wet. Bird feet imprints can be seen in litter. When walked on, feet imprints stay in litter. Forms a ball if squeezed and holds together when released (more than 35% moisture content).

Friability

- Friable** Free flowing. Foot moves easily through the litter.
- Clumping** As foot moves through litter, visible clumps of cake break away. Litter starting to cake in parts but still recoverable.
- Caked** Can't move foot through litter. Crusted / capped layer of material on surface.



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When to take corrective action

Any score of 3, 4 or 5 should receive corrective action. As the litter starts to clump and become wetter, conditions should be monitored more closely. Any score of 4 or 5 needs action as soon as practical.

Specific corrective action will depend on the litter condition, climate and age of the flock. This will be determined on a case-by-case basis.

Any small areas of wet or caked litter should receive corrective action and the cause of the problem should be identified and addressed.

Types of corrective action

Maintain or adjust drinkers to minimise leakage

Wetter litter under the drinker line can indicate that the drinker height or pressure needs adjusting or the drinkers need maintaining. For more information on drinker lines, see the fact sheets on drinker management.

Mechanically condition/till litter

The only way to bring caked litter back to a friable state is to mechanically break it up. The best time to do this depends on the age and density of the birds. If bird age is 27 to 35 days, consider waiting until after the first thin-out to till the litter. This will minimise stress from the machinery.

Increasing ventilation after tilling will help the litter dry quickly—hopefully enough to prevent future caking. The evaporation rate is 5 to 15 times greater for the first 4 to 6 hours after litter tilling and will continue to be 1.5 to 5 times greater for at least 20 to 24 hours after tilling if the litter remains friable. To get the most from litter tilling, till the litter in the mid to late morning so you can increase ventilation throughout the afternoon to remove as much water as possible.

Increase ventilation and air circulation

Additional heat and ventilation is required to dry moist or wet litter. Added wind speed at the litter surface will increase the rate of evaporation of water and remove it from the shed. Ventilation should also be increased to dry exposed wet litter after mechanical turning.

If litter moisture and caking is a regular challenge, consider installing a well-designed air circulation system that will bring warm air down to the litter surface and

create constant air movement at the litter, especially when exhaust fans aren't running. Air movement at the litter surface will increase litter drying even when the relative humidity can't be kept low. Circulation fans also make the temperature more uniform throughout the shed, which will reduce the potential for condensation and caking along walls or other troublesome areas.

Improve shed tightness and insulation

Monitor continually problematic areas and consider if condensation, cold air drafts from shed leakage or water leaks are contributing to the problem.

Incorporate dry and friable litter

Adding and mixing dry and friable litter with small areas of wet litter will improve overall absorbency and reduce the likelihood of caking. This does not necessarily mean bringing new material into the shed. Make use of dry and friable litter that might be next to the wet area.

Remove irreparable litter

Litter that is very wet and caked may be irreparable. In these situations, the wet litter may need to be removed and replaced with dry and friable litter.

More resources

- Watch the litter assessment video and litter management animations on YouTube https://youtube.com/playlist?list=PLxHH9eLA4tnaEroY1TucFldUZL0RMpB_Y
- Read the litter fact sheets on drinker management, litter tilling and ventilation.
- Request a litter assessment pocket book.

Contact

Mark Dunlop
Department of Agriculture and Fisheries (Queensland)
mark.dunlop@daf.qld.gov.au

Rachele Osmond
Department of Agriculture and Fisheries (Queensland)
rachele.osmond@daf.qld.gov.au

AgriFutures Australia Project No. PRJ-011502
AgriFutures Australia Publication No. 23-075



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