Drinker management to improve bird welfare from day one

Considerable resources have been invested to develop watering management tools specifically for enclosed watering systems to help farmers produce healthy flocks and achieve successful performance outcomes.

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Ziggity stress the importance of proper management of watering systems in terms of drinker height and using the correct water pressure, and they strongly support principles that have challenged widespread practices and ingrained traditions.

Namely, it is key to acknowledge that watering systems can play a major role in either enhancing or compromising bird welfare as it relates to dry litter conditions and clean potable water.

These principles are particularly important and impactful during the first week of management in a poultry operation. Vitally, this includes paying more attention to dry floors and better management of the bird's environment to reduce the risk of bird health challenges, diseases and other problems caused by wet litter conditions.

In poultry production facilities, from day one, dry litter is a vital element in producing healthy and thriving birds whereas:

- Wet litter is a breeding ground for disease.
- Wet litter creates ammonia.
- Wet litter can cause pododermatitis.
- Wet litter harms bird performance (FCR, undergrades, liveability).

Ventilation can help, but Ziggity believe it best to prevent wet litter to begin with, as ventilation will vary from season to season and from house to house. Paying attention to keeping litter dry in the first place is the best overall solution.

Bird health is also threatened by a lack of hygienic potable water often made difficult by use of open type watering systems such as troughs, bell drinkers and systems with catch cups.

They are open to the environment and easily become contaminated with bacteria that birds consume, and once infected they then share their disease with other birds

through this shared drinker vessel. Also worrisome is that these systems require birds to lift their heads to drink, and in the process of doing so, water falls from their beaks and creates wet litter.

Again, the first week of production is critical for a healthy start and the contamination risks presented by catch cups multiply the health and production concerns of the young birds. In contrast, a totally enclosed nipple type watering system provides clean, hygienic water directly to the bird's beak when properly managed.

To that end, system management procedures and tools have been developed based on successful field experience, aimed at providing birds with all the water they need, while minimising water spillage that can create wet litter and an unhealthy environment.

It is also important to understand that water usage is not the same as water consumption. This principle is central to effectively managing nipple-type poultry watering systems. Unfortunately, many people in the poultry field do not recognise this distinction and, as a consequence, production results are compromised.

Water usage = water consumption + water spillage

Water usage is the total amount of water going into a poultry facility's drinker lines. Once in the drinker lines, two things can happen to the water. While drinking, a percentage of the water is consumed or ingested by the birds. This truly is water consumption. At the same time, a percentage of this water is spilled – it is not consumed or ingested by the birds.

When a bird pecks the drinker's trigger pin, water discharges from the drinker. If all the discharged water can be retained in the bird's beak, then little or no water is spilled. However, if the water discharged is greater than what can be retained in the bird's beak, the oversupply results in water spillage.

When a producer measures the amount of water going through the water meter, this measures water usage – which includes both water consumed AND water spilled.

Lack of understanding can lead to a crucial mistake

Poultry producers know that the more water birds consume the more they eat and the birds grow faster and bigger. If producers equate water meter readings to water consumption, then they may increase line column pressure to increase water discharge from the drinkers (confirmed by meter readings) so bird weights will increase.

The problem is that bird beaks cannot retain all the increased water discharge, so the producer only really achieves an increase in spillage and increased moisture levels in the litter, not in water consumption.

During the first week of production the negative impacts of wet litter are multiplied and need to be avoided.

Understanding watering principles, and using the most effective management tools and procedures will help ensure that your poultry production facility will have the best start possible. ■