

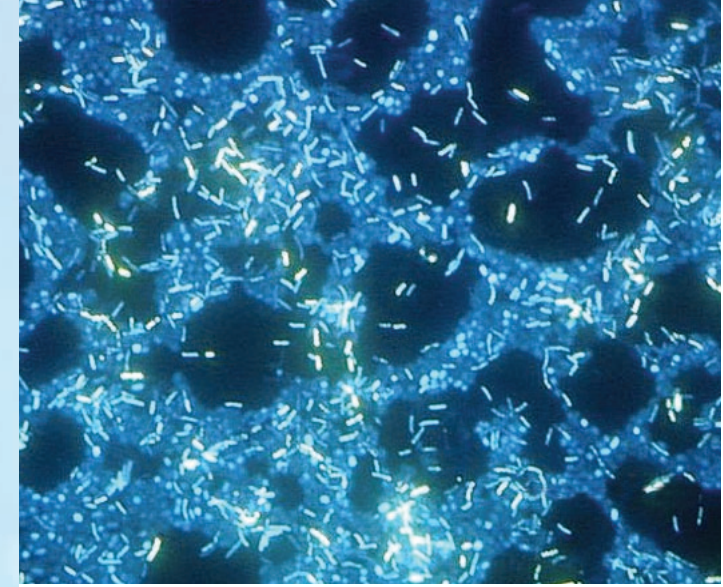


**We want good,
clean drinking
water.
So do our birds.**

Realize the difference clean water can make.

BIRD, LITTER, SYSTEM PERFORMANCE

We all recognize the importance of clean drinking water for good health. Birds are no different. But, watering systems provide a perfect breeding ground for bacteria and biofilm. Even if the water coming into the house tests safe, it can become germ-infested in the watering lines. That's why the design and maintenance of your system becomes so important.



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The makeup of biofilm.

When bacteria attach to the interior wall of a water pipe, they begin to exude a sticky substance called biofilm. This substrate becomes an ideal home for bacteria to further reproduce and colonize. Bacteria feed off the biofilm and any other nutrients in the water.

Biofilm can build up rapidly and become a breeding ground for waterborne pathogens, such as E. coli. When birds ingest these pathogens, they develop diseases that lead to health and performance problems. That's why it's important for producers and integrators to implement management procedures that combat the potential dangers of biofilm.

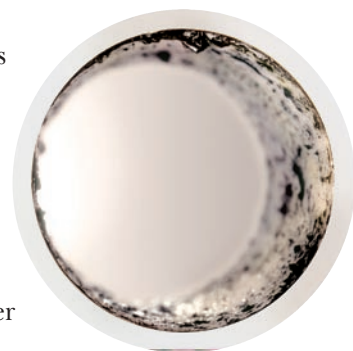
Biofilm — the lurking menace.

Buildup affects bird health — and performance.

You may not be familiar with the term “biofilm,” but you encounter it on a regular basis. So do your birds. Plaque that forms on your teeth is a form of biofilm. So is the film coating on the inside walls of your poultry watering system pipes.

Biofilm by itself poses a significant threat to bird health. Interventions regularly used in poultry operations aggravate the problem even more. Glucose and milk powder used to deliver vitamins and medicines add even more nutrients into the biofilm. And that dramatically stimulates rapid reproduction of harmful bacteria.

Further complicating the situation, the low pressure used in enclosed watering systems produces little or no turbulence to break up the buildup. An even more dangerous problem occurs when significant buildup in crucial areas of the drinker shuts off or severely restricts water discharge. This insufficient discharge coupled with increased bacteria levels harm bird performance.



Combat biofilm buildup early and often.

To reduce biofilm buildup, follow these basic recommendations:

- ▶ Always high-pressure flush after introducing medications, vitamins or other interventions.
- ▶ Flush the watering lines at least once a week.
- ▶ Flush for one minute for every 30 meters or 100 feet of system length.
- ▶ Use hydrogen peroxide-based cleaners to ensure complete and thorough biofilm removal.
- ▶ Upgrade the regulators by adding a solenoid valve and control clock for quick and easy unattended flushing.
- ▶ Install a watering system with minimal internal protrusions. These systems flush far more effectively and result in better biofilm removal.

**For more information
about how to maximize
your bird, litter and
system performance,
contact**

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