



ONE FAMILY.
ONE PURPOSE.

Proper Waterline Disinfection



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Purpose:

The poultry house environment is made up of many living organisms, not just the chickens we care for. Some of these living organisms can create health threats for our chickens. Many bacteria, viruses, molds and fungi can cause mild to extreme health issues. As our industry is continually challenged to reduce and remove antibiotic usage from our production systems, we have seen an increased challenge by these environmental organisms.

One of the primary challenges in water is from the bacteria *Pseudomonas*. *Pseudomonas* can create respiratory and enteric issues in chickens and can be a primary cause of chick mortality. Antibiotics can help chicks overcome early infection, but these have been removed from our hatchery systems.

We are finding *Pseudomonas* in waterlines that have and have not been treated with a waterline sanitizer. The question is: "Why is this bacteria living in our water systems even with treatment?"

Like many bacteria, *Pseudomonas* love water, heat and biofilm. Many times our water systems have biofilms that are hard to break-up. In many cases we only get the surface of the biofilm and actually expose layers below that contain *Pseudomonas*. Also, *Pseudomonas* are difficult to remove from water nipples, even when the nipples are triggered.



There are a few recommended methods below. It is recommended to test waterlines before and after treatment to know what organisms are in your systems. If you find little or no contamination (less than 10 colonies), use the **Easy Attack**. If you find a moderate amount of challenge (10-20 colonies), use the **Moderate Attack**. If you find high bacterial (30+ colonies), fungi or mold challenges, especially *Pseudomonas*, use the **High Attack** method.

*Suggested waterline sanitation programs to attack *Pseudomonas* and other pathogens:*

Easy Attack, somewhat effective:

1. Flush in waterline sanitation product at the recommended higher concentration for waterline sanitation for 24 hours.

2. Ensure product makes it to the end of EVERY waterline and flushed into any supplemental drinker. Use a dye to ensure this is done.
3. Trigger every nipple to allow the sanitation product to get into the seat of the nipples.
4. After 24 hours flush in the manufacturers recommended maintenance dose.
5. Ensure the higher concentration level is completely flushed out and the maintenance dose is flushed in by running lines and dumping supplemental drinkers until water is flushed clear. Use dye to ensure all high concentration sanitation is removed. If there is any remnant of the higher concentration of waterline sanitizer, it will cause the chicks to back off water and lead to dehydration and higher mortality.
6. Use the maintenance dose throughout the flock as recommended by manufacturer.

Moderate Attack, more effective:

1. Flush in an acid based waterline sanitation product for 24 hours. For example: citric acid, sodium hydrogen sulfate, etc...
2. Ensure product makes it to the end of EVERY waterline and flushed into any supplemental drinker. Use a colored dye to ensure it is flushed into every line all the way to end.
3. Trigger every water nipple.
4. After 24 hours, Flush in waterline sanitation product (sodium chloride based, hydrogen peroxide based, etc...) at the recommended higher concentration for waterline sanitation for 24 hours.
5. Ensure product makes it to the end of EVERY waterline and flushed into any supplemental drinker. Use a different color of dye to ensure the acid product is removed and the waterline sanitizer is flushed in completely.
6. Trigger every nipple to allow the sanitation product to get into the seat of the nipples.
7. After 24 hours flush in the manufacturers recommended maintenance dose.
8. Ensure the higher concentration level is completely flushed out and the maintenance dose is flushed in by running lines and dumping



supplemental drinkers until water is flushed clear. Use dye to ensure all high concentration sanitation is removed. If there is any remnant of the higher concentration of waterline sanitizer, it will cause the chicks to back off water and lead to dehydration and higher mortality.

9. Use the maintenance dose throughout the flock as recommended by manufacturer.

High Attack, most effective (especially when attacking Pseudomonas):

1. Flush in an acid based waterline sanitation product for 24 hours. For example: citric acid, sodium hydrogen sulfate, etc....
2. Ensure product makes it to the end of EVERY waterline and flushed into any supplemental drinker. Use a colored dye to ensure it is flushed into every line all the way to end.
3. Trigger every water nipple.
4. After 24 hours, Flush in waterline sanitation product (sodium chloride based, hydrogen peroxide based, etc...) at the recommended higher concentration for waterline sanitation for 24 hours.
5. Ensure product makes it to the end of EVERY waterline and flushed into any supplemental drinker. Use a different color of dye to ensure the acid product is removed and the waterline sanitizer is flushed in completely.
6. Trigger every nipple to allow the sanitation product to get into the seat of the nipples.
7. Do a "fresh" water flush.
8. Remove all water nipples.
9. Soak nipples in the recommended higher concentration of waterline sanitizer for 24 hours.
10. Replace all the nipples.
11. After 24 hours flush in the manufacturers recommended maintenance dose.
12. Ensure the higher concentration level is completely flushed out and the maintenance dose is flushed in by running lines and dumping supplemental drinkers until water is flushed clear. Use dye to ensure all high concentration sanitation is removed. If there is any remnant of the higher concentration of waterline sanitizer, it will cause the chicks to back off water and lead to dehydration and higher mortality.
13. Use the maintenance dose throughout the flock as recommended by manufacturer.

Always inspect what you expect. Sometimes older water equipment/systems take more effort to get cleaned up. However, don't be fooled, new systems can grow bacteria readily as well. Remember, it is water, heat and organic matter in a poultry house that cause these harmful organisms to thrive.



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