

CHLORINATING POULTRY DRINKING WATER

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Water is an essential part of life. It follows that improving water quality is a basic yet important way to improve poultry health. This concept becomes very clear given the following: In poultry houses, thousands of birds spend each day in extremely close proximity to one another, sharing the same water and the same feed. In addition, their water supply can easily become contaminated with feed and manure, which creates the ideal environment for the growth of *E coli* and other similar bacteria. By the very nature of poultry houses, if one bird acquires a disease, thousands of other birds subsequently come into contact with the infected bird. The effects of such disease transmission can be devastating to a flock.

Given the potential for such dire consequences, the importance of properly disinfecting poultry drinking water becomes apparent. Chlorine disinfection can help solve this problem. Using chlorine to improve water quality has a large number of benefits. It reduces the levels of bacteria in drinking water and helps control disease outbreaks within a flock, leading to healthier birds with lower mortality rates. Healthier birds translate into decreased medication costs, increased body weight, better egg production, efficient feed conversion and improved livability. Chlorine also prevents algae, slime, and bacteria buildup in fogger nozzles. Furthermore, it improves food safety efforts by reducing the spread of diseases such as *Campylobacter* and *Salmonella*. All of these individual benefits lead to one very important benefit for poultry houses: increased profits.

While many poultry houses still use no form of chlorination, a popular solution is the use of chemical feed pumps to add sodium hypochlorite (bleach) to poultry drinking water. However, sodium hypochlorite comes with numerous disadvantages. It requires daily mixing along with constant attention. Bleach also creates a false sense of security in that one is easily led to believe that the system is operational simply because the pump is running, which is not always the case. Additionally, empty buckets, broken pumps, air binding in chemical lines, and lack of flow are all common problems associated with sodium hypochlorite and its related equipment.

A better way to chlorinate poultry drinking water is through the use of gas chlorine. Its more expensive installation and start-up costs paired with numerous misconceptions regarding its safety deter many people from using gas. However, gas chlorine is an exceptional water purifier, especially in comparison to sodium hypochlorite. It is true that purchasing and setting up the equipment needed for gas chlorination can be higher than other options. But it is essential to look at the long-term picture. Gas chlorine is 100% chlorine while bleach has extremely low chlorine levels, typically ranging from 5.25% to 15%. Additionally, the cost per pound of sodium hypochlorite is more than double the cost per pound of gas chlorine. So, a pound of gas chlorine is both cheaper and much more concentrated than a pound of sodium hypochlorite. As a long-term solution, gas chlorine is clearly more economical.

In regards to its safety, gas chlorine has gotten a bad reputation simply due to a multitude of misconceptions surrounding it. In actuality, gas is safer than sodium hypochlorite. Present-day, fail-safe systems have virtually eliminated the dangers traditionally associated with the use of gas chlorine.

Sealed, vacuum-operated systems, such as the Regal Gas Chlorinator, prevent leaks since the gas is never under pressure and loss of ejector water supply – even accidental breakage of a vacuum line – will cause the system to immediately shut off. On the other hand, sodium hypochlorite often brings with it a false feeling of safety. Many accidents and deaths have occurred with household bleach, and bleach-soaked rags have been known to start fires. Every year, bleach-related skin burns, eye injuries and poisonings are reported. Furthermore, sodium hypochlorite leads the nation in chemical-related accidents while gas chlorine has the lowest accident rate. This is partly due to the fact that the equipment used to dispense gas chlorine is such that the equipment operator never even comes into direct contact with the chemical.

After taking a closer look, it becomes evident that gas chlorine has a number of benefits and is one of the best solutions available for water disinfection in poultry houses. Vacuum-regulated gas chlorinators provide constant water disinfection, consistent chlorine residuals, reduction of disinfection and medication costs, reduced daily personnel activity, and the safest water purification system available.