Why More Dairies Are Looking Beyond Traditional Chemistry

For years, dairies have relied on two main approaches to water treatment: chlorine and hydrogen peroxide. Both can work — but both come with trade-offs that tend to show up over time.

Chlorine is inexpensive and familiar, but its performance is highly dependent on pH, and it struggles to penetrate the biofilm that builds up inside water lines. Residuals often break down long before the water reaches the trough.

Hydrogen peroxide oxidizes effectively on contact, but it breaks down quickly and typically leaves little residual behind — so protection can fade before it ever reaches the far end of a water system. It also has limited effect on biofilm that's already established in pipes.

That gap — between what's applied and what actually reaches the cow — is why more dairies are choosing chlorine dioxide.

Three Key Ideas

Stays effective across a wide pH range — where chlorine performance drops off

Penetrates biofilm — reaching bacteria that chlorine and hydrogen peroxide often leave behind

Holds its residual further through the system — closer to what actually reaches the cow

Could Chlorine Dioxide Be Right for Your Dairy?

The right chemistry starts with understanding your water — not guessing at it.

That's why every Aquapproach recommendation begins with a water assessment before a treatment program is ever proposed.

Talk with an Aquapproach Dairy Specialist

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AQUAPPROACH TREATMENT SYSTEMS

THE DAIRY PRODUCER'S GUIDE TO Chlorine Dioxide

Clean Water Begins With Better Chemistry.

WHY MORE PRODUCERS ARE MAKING THE SWITCH

Cleaner Water Delivery
Treatment continues throughout the distribution system

Better Biofilm Control
Helps address one of the biggest hidden challenges inside water lines and drinkers

Easier to Verify
Chlorine dioxide residuals are straightforward to test — so you can confirm treatment is working, not just assume it

More Reliable Residuals
Residual ClO2 in the drinkers will eliminate new contaminants

Consistent Performance
Designed to perform across changing water conditions

Complete Water Management
Most successful programs combine chemistry, monitoring, testing, and support

Chlorine dioxide isn't just a different sanitizer. It's part of a different approach to water management.

Separating Fact From Fiction

MYTH: "Chlorine dioxide is just another form of chlorine."
FACT: Although their names sound similar, chlorine dioxide behaves very differently from free chlorine.

MYTH: "More sanitizer is always better."
FACT: Successful water treatment is about delivering the right residual — not the highest residual.

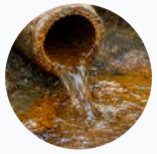
MYTH: "Chemical water treatment isn't safe for livestock."
FACT: Properly managed chlorine dioxide treatment is designed to be effective at low, controlled residuals.

How Chlorine Dioxide Works

Chlorine dioxide works throughout the water system to deliver cleaner, safer water to every drinker.

Well
Water is drawn from the source

May contain minerals, iron, organic matter, and microorganisms



Iron / Minerals
Water can pickup impurities

Impurities can affect water quality, taste, and system cleanliness.

Treatment
ClO2 is generated and injected into the water

Powerful oxidation begins working immedietly.

Storage
Treated water is stored with residual protection

Helps maintain safe, clean water between treatment and use.

Water Lines
ClO2 travels throughout the distribution lines

Penetrates biofilm and helps control bacteria in the pipes.

Drinkers
Clean, treated water reaches every drinker

Better tasting, cleaner water for healthier, more productive cows.

Cow
Consistent, high quality water supports herd health

Clean water. Healthy cows. Better results.

The Hidden Challenge

You can’t manage what you cant see