



## POULTRY PRODUCTION CYCLE

**Reduced contamination level and improved production performance and profitability**

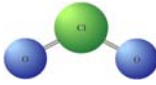

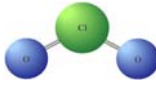

The only way to address and eliminate biofilm risks is to strip the biofilm, prevent its re-growth and kill the microbial contamination



### **Benefits dutrion<sup>®</sup> "golden" Chlorine Dioxide:**

- Improves performance of birds!
- Very fast and long active in waterlines compare to other sanitizers
- Does not have pH limitation and is not corrosive for equipment
- Final elimination of (waterborne) pathogens in poultry barns
- Effective & fast sanitation program with spraying & fogging
- High efficacy against E.coli, Salmonella, Listeria, Aspergillus, Penicillium, Staphylococcus
- Easy to apply, easy to monitor and very safe
- Very cost effective compare to all other disinfectants
- NO INVESTMENT COSTS TO START; use regular dosing pump

### **Advantages dutrion<sup>®</sup> on poultry farms**

<u>BROILER SHEDS</u>	<u>LAYER &amp; BREEDER HOUSES</u>
 	 
Proven Return on Investment (R.O.I.) Improves FCR (feed conversion rate) Better growth potential Low investment per bird (0.005 – 0.01 \$) Improves uniformity of flock Lower mortality rate Condemned % declines Less chance health problems occur Approved for poultry drinking water	Proven return on Investment (R.O.I) Lower mortality rate Better egg shell quality Less feed costs Longer egg production cycle Extra water intake Clean lines for adding water soluble feed additives Always pure water till the far end Long lasting activity with high/low water flow
<u>EASY TO APPLY PER SHED OR ON WHOLE FARM</u>	<u>EXTREME EASY TO APPLY IN EACH BARN</u>
<u>UNIQUE WATER SANITATION PROGRAM</u>	<u>THINK OF HATCHERY ADVANTAGES TOO</u>

PRACTICAL EXAMPLE: 45,000 broilers per flock @ \$ 0.01 investment costs per bird with DUTRION

	<u>BEFORE (Peroxide)</u>	<u>FLOCK 1 (DUTRION<sup>®</sup>)</u>	<u>FLOCK2 (DUTRION<sup>®</sup>)</u>
<b>FCR</b>	1.81	1.74	1.71
<b>Mortality %</b>	3.92	2.54	2.99
<b>Condemned %</b>	0.85	0.24	0.50
<b>Growth/ day in grams</b>	59.46	59.16	63.33

dutrion<sup>®</sup>; low investment, high return

dutrion<sup>®</sup> available in unique tablets



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## PATHOGEN REDUCTION AT SLAUGHTER

### Benefits **dutrion**® Chlorine Dioxide!

#### CLO2 Germicidal Spectrum Bacteria

Pseudomonas Aeruginosa  
Campylobacter Jejuni  
Pseudomona Specie  
Flavobacterium Species  
Enterobarcer Cloaceae  
Yersinia Enterolitica  
Enterobarcter Hafnia  
Clostridium Sporogenus  
Proteus Vulgaris  
Clostridium Dificile  
Klebsiella Pneumoniae  
Clostridium Perfringens  
Salmonella Typhi  
Fusobacterium Nucleatum  
Salmonella Enteritidis  
Bacilus Subtilis  
Salmonella Gallinarum  
Bacilus Circulans  
Salmonella Typhimorium  
Bacilus Megatarium  
Salmonella Choleraesuis  
Bacilus Cereus  
Salmonella Typhosa  
Bifedibacter Liberium  
Corynebacterium Nucleatum  
Staphylococcus Aureus  
Sarcinae Lutae  
Staphylococcus epidermia  
Streptococcus Pyrogenes  
Streptococcus Faecalis  
Strep 1, 2, 3.  
Mycobacteroi Bovis  
Mycobacterium Smegmatis  
Mycobacterium kansaaii

- Removal of biofilm which hinders efficiency of equipment
- Longer life of equipment, less down time
- Consumer confidence and acceptability
- Disinfection (sterilization) capabilities are not diminished at all in the presence of fats, oils, proteins, body fluids etc. because it has very selective and very few chemical reactions
- Strongly soluble in water, therefore, it has a long-lasting residual which reduces the potential for cross infection or re-contamination
- Broad spectrum, fast acting disinfectant, effective against a wide range of bacteria, spores, fungi, and viruses at relatively low concentration and short contact periods
- It is colorless, has a mild medicinal odor and removes if any odor, low corrosively to metals and the lowest acute toxicity rating from EPA
- High efficacy against E.coli, Salmonella, Listeria, Aspergillus, Penicillium, Staphylococcus etc
- High efficacy is obtained irrespective of pH
- Non-corrosive and non-staining of equipment
- Easy to apply and to monitor
- Meets HACCP (food safety) management requirements
- Cost Effective in many applications

#### CLO2 Germicidal Spectrum Fungi

Candida Albicans  
Trichophyton Rubrum  
Scopulariosis Species  
Aspergillus Niger  
Trichophyton Mentagrophytes  
Aspergillus Flavus  
Mucor Species  
Fusarium Specie  
Saahromyces Cerevisiae  
Fonsecaea Pedrosoi

#### Virus

Herpes Virus I  
Poliovirus  
Herpes Virus II  
Encephalomyocerditis (EMS)  
Adenovirus Echovirus  
Vaccina Virus  
Coxsakiavirus  
Vesicular Stomatitis Virus (VSV)  
Influenza  
Para Influenza  
Feline Parvovirus  
Bluetongue Virus  
Mouse Flu  
Mouse Hepatitis Virus (MHV)  
Minute Virus of Mice (MVM)  
Mouse Encephalomyelitis Virus  
New Castle Disease Virus  
Mouse Polio Virus (MEV)  
Iridovirus  
Pertiviries – Togaviridae

#### Others

Vidrio Cholerae  
Culex Quinquifasiatus  
Mycoplasma



The chlorine dioxide process is "extraordinarily" better than other chemical methods of eliminating pathogens.



Powerful Water Treatment

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