

# HATCHERY CONTAMINATION

## PRINCIPLES & PRACTICAL TIPS FOR EFFECTIVE PREVENTION

### 4 Core principles to prevent Hatchery Contamination

#### 1 PHYSICAL PROTECTION



Goal: Prevent airborne and cross-contamination

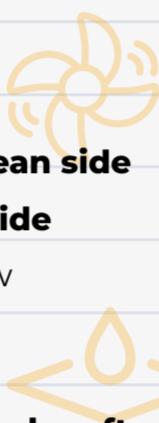
- ✓ Plan hatchery design according to:
  - Prevailing winds
  - Egg-to-chick flow
- ✓ Always separate four flows:
  - Egg flow
  - Setter flow
  - Hatcher flow
  - Chick flow
- ✓ Avoid cross-contamination of:
  - People
  - Equipment
  - Ventilation

#### VENTILATION RULES



- Fresh air intake = **clean side**
- Exhaust air = **dirty side**
- Never reverse airflow

#### MOISTURE CONTROL



- Keep trays & baskets **dry after cleaning**
- Use ventilation at **lowest possible temperature**
- Dry immediately after washing, **before disinfection**
- Avoid fresh air intake in hot, humid conditions

#### DUCTWORK TIP



- Minimize air ducts over machines
- Prefer **walkable plenums**
  - easier cleaning, less mold risk

#### 2 KNOWING YOUR ENEMY



Goal: Target the right microorganisms

#### COMMON HATCHERY CONTAMINANTS



- ✓ Fungi & spores:
  - (e.g. Aspergillus, Cladosporium) → **high resistance**
- ✓ Gram-negative bacteria
  - (E. coli, Pseudomonas, Proteus)
- ✓ Gram-positive bacteria
  - (Staphylococcus)

#### KEY RULE



- ✓ Effectiveness depends on the specific strain

#### DISINFECTANT SELECTION



##### ✓ Widely used

- Quat ammonium
- Glutaraldehyde
- Peracetic acid

##### ✓ Newer options

- Chloramine T
- Anolytech
- Ortho-phthalaldehyde

#### BEST PRACTICE

- ✓ Perform **MIC tests** (Minimum Inhibitory Concentration)
- ✓ Test **every new disinfectant batch**

#### 3 PTPL THE CLEANING FORMULA



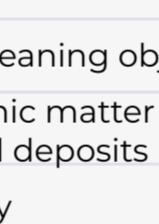
Power • Temperature • Product • Lapse



#### BEST PRACTICE

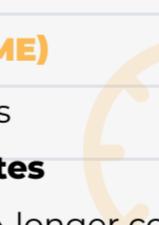
- Use water **>50°C**
- Or fully remove organic matter first

#### PRODUCT



- Choose based on cleaning objective
  - **Alkaline** → organic matter
  - **Acidic** → mineral deposits
- Foam helps visibility
  - **Foam helps visibility = better adhesion**

#### LAPSE (CONTACT TIME)



- Time = effectiveness
- Minimum **20 minutes**
- More errors earlier → longer contact needed

#### 4 GAS DIFFUSION



Goal: Safe & effective gaseous disinfection

#### KEY FACTORS



- ✓ Correct **dosage**
- ✓ Proper **air temperature**
- ✓ Uniform **distribution**

#### IMPORTANT PRINCIPLES



- Gas disinfects the **air and surfaces**, not the egg interior
- Effective concentration depends on:
  - Room volume
  - Free air space
  - Egg quantity

## Key Takeaway

Hatchery contamination prevention requires **structure & discipline**

Focus on:

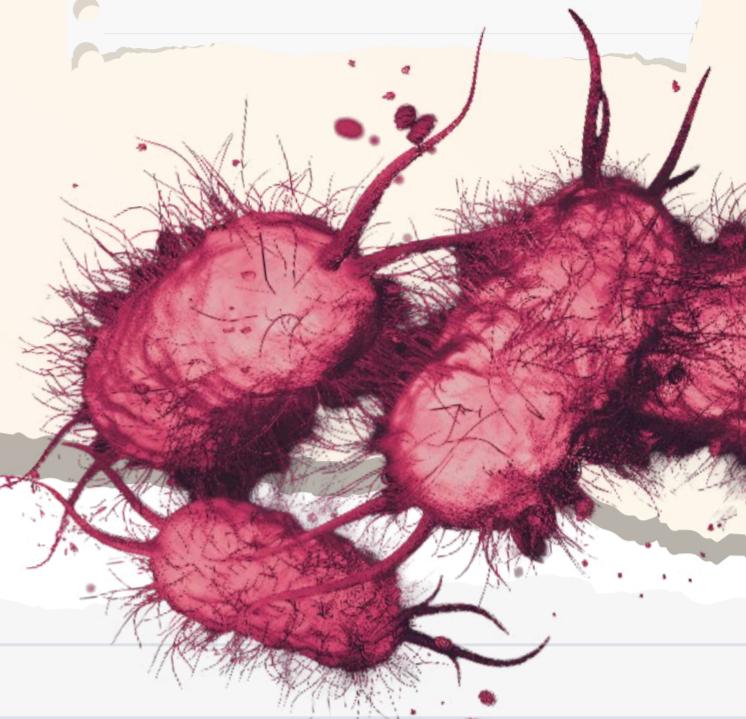
- ✓ Physical separation
- ✓ Targeted disinfection
- ✓ Correct cleaning parameters
- ✓ Controlled gas diffusion

## Result

- ✓ Lower microbial pressure
- ✓ Better hatchery hygiene
- ✓ Safer chicks & stronger production outcomes

## Why it matters

- Hatcheries are the **central hub** of poultry production
- Link **breeder farms** → **commercial farms**
- Contamination spreads **fast & widely**
- Prevention is critical for **overall production success**



BREEDING FOR SUCCESS... TOGETHER

[www.lohmann-breeders.com](http://www.lohmann-breeders.com)



LOHMANN  
BREEDERS

It's the egg