



# THE BASICS OF DISINFECTION & PROPER BIOSECURITY



Matt Miller, CEO  
Bio-Tek Industries

1

## ▶ Topics

- Review of Disinfectants
- How to Choose a Disinfectant
- Using Disinfectants:
  - Breeder Facilities
  - Hatchery Facilities
- Other Bio-Security Programs

2

## Review of Disinfectants

- Quats
- Gluteraldehydes
- Formaldehydes
- Phenols



3

## Quats

- Good germicidal ability
- Requires totally clean surface to perform
- Leaves sticky residue
- Good for hatchery with precleaning prior to disinfection



4

## Gluteraldehydes

- Low percentage actives
- Little data available
- Toxic, fumes
- Originally designed as a hospital sterilant



5

## Formaldehydes

- Harsh and abrasive
- Low percentage of actives
- Dangerous



6

## Phenols

- Well suited for farm applications
- Remain active in soil
- Provide broad spectrum activity
- Biodegradable



7

## How to Choose the Proper Disinfectant



8

## How to Choose a Disinfectant: EPA Requirements

- EPA regulates
- Testing is performed under "GLP" guidelines
- Minimum requirements for claims are 5% organic soil and 400 PPM hard water



9

## How to Choose a Disinfectant: Comparing Benefits

- Broad Spectrum EPA Claims
- Non-Corrosive will not harm metal equipment
- Organic Soil Loads at 10% work twice as hard as 5% claims in the field



10

## How to Choose a Disinfectant: Comparing Benefits

- Hard Water Claims at 1000 PPM
- Dilution Factor of ½ oz per gallon (1:256)
- Residual Action



11



## Cleaning and Disinfecting Breeder Houses

12

## Clean Before Disinfecting Breeder Houses

- Remove equipment prior to cleaning
- Remove litter when scheduled
- Apply insecticides & weed control
- Blow, vacuum or sweep-out dust, down and feathers from walls and ceilings



13

## Clean Before Disinfecting Breeder Houses

- Cover electrical outlets, thermostats, and exposed wiring
- Apply cleaning solutions



14

## Apply Disinfectant: Breeder Houses

- Use gloves and observe handling precautions
- Dilute disinfectant accurately
- Cover entire room with disinfectant
- Disinfect all equipment removed from building



15

## Apply Disinfectant: Breeder Houses

- Make sure surfaces remain wet for at least 10 minutes
- Rinse all waterers and feeders thoroughly before use



16

## Apply Disinfectant: Breeder Houses

- Wait until room is dry before moving birds in
- Keep a foot bath of disinfectant at each building entrance
- Change foot bath solution daily



17

## Cleaning and Disinfecting Hatcheries



18

## Hatchery Bio-Security

- The hot humid Hatchery environment is ideal for the growth of bacteria and molds
- Baby chicks rely on underdeveloped immune systems to protect them from infection
- Minor decreases in hatchability will result in the loss of thousands of birds

19

## Clean Hatchers & Setters

- Clean and Disinfect after each hatch or incubation
- Remove all components from inside hatcher or setter
- Remove gross soils, chick down and eggshells with high or low pressure sprayer

20

## Clean Hatchers & Setters

- Apply Cleaner through sprayer or foamer
- Allow a minimum of ten (10) minutes before scrubbing or high pressure spraying

21

## Disinfect Hatchers & Setters

- Disinfect after each hatch
- Run trays and buggies through automatic washers
- Apply disinfectant, use gloves and observe proper precautions
- Place cleaned and disinfected trays and buggies back in hatcher

22

## Clean & Disinfect Miscellaneous Equipment

- Tray Wash Machines
- Processing Equipment
- Walls and floors in Hatcher and Setter room daily
- Hallways and break rooms weekly
- Clean transfer heads of Innoject Machines after use

23

## Hatchery Fogging

- Follow manufacturers directions for fogging times
- BIO-TEK recommends the fogging of rooms
- By fogging the entire room, you can control airborne contaminants

24

## Hatchery Fogging

- All rooms within the Hatchery should be fogged daily
- Rooms to be fogged include: Hatcher rooms, Setter rooms, Tray Wash rooms, Processing rooms, interior of Chick Busses, interior of Transfer Trucks, and Egg Holding rooms



25

## Other Bio-Security Programs



26

## Other Bio-Security Programs

- Good management must be utilized to integrate products and programs
- Use vaccines to build immunity
- Insects, birds, and rodents



27

## Other Bio-Security Programs

- Control human contamination by limiting access, and strict shower-in/shower-out protocol for all personnel
- Use foot baths at all facilities
- Transportation vehicles must be cleaned and disinfected between sites



28

## SUMMARY

- Prevention is Key
- A coordinated approach is needed
- Thank you for listening!
- Are there any questions?



29