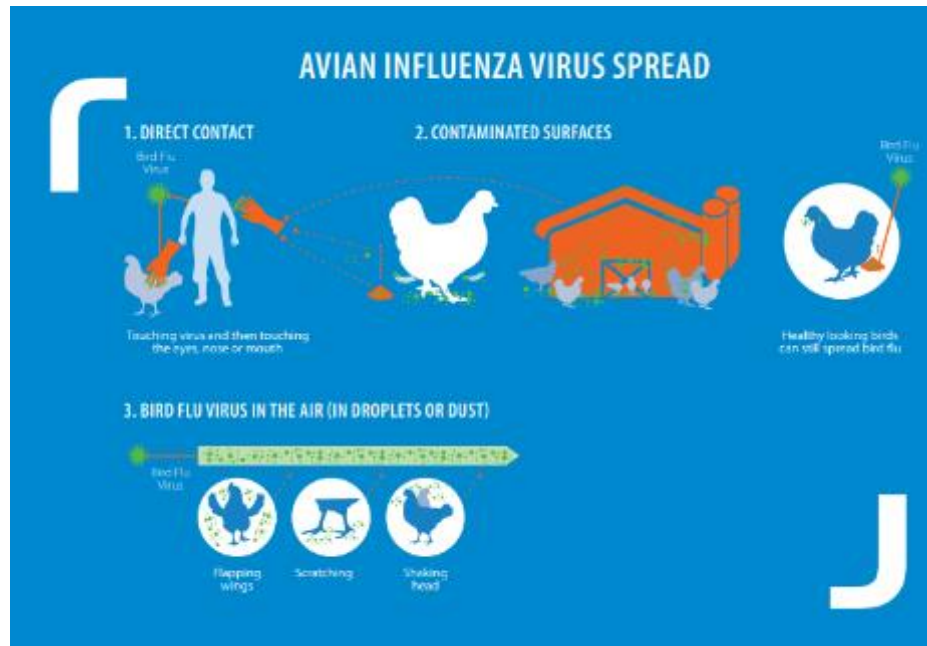


HOW TO CONTROL & PREVENT AVIAN INFLUENZA?

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AVIAN INFLUENZA



SOURCE: www.cdc.gov

Avian Influenza (AI) is one of the most important diseases in poultry.

Effective tools to prevent the **spread** and to prevent **introduction** of Avian Influenza viruses are:

- Farm biosecurity
- Good farming practices
- Controlling movement on the farm

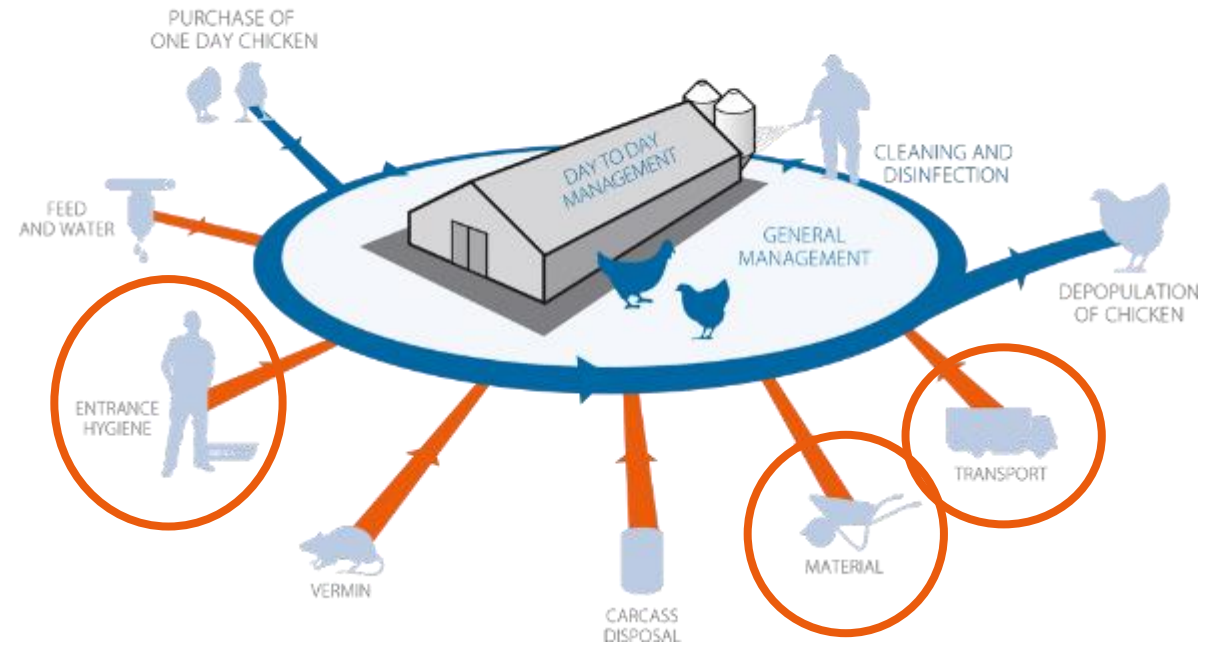
01

Farm biosecurity

HIGH RISK ROUTES OF TRANSMISSION

According to FAO 90 % of AI is spread by:

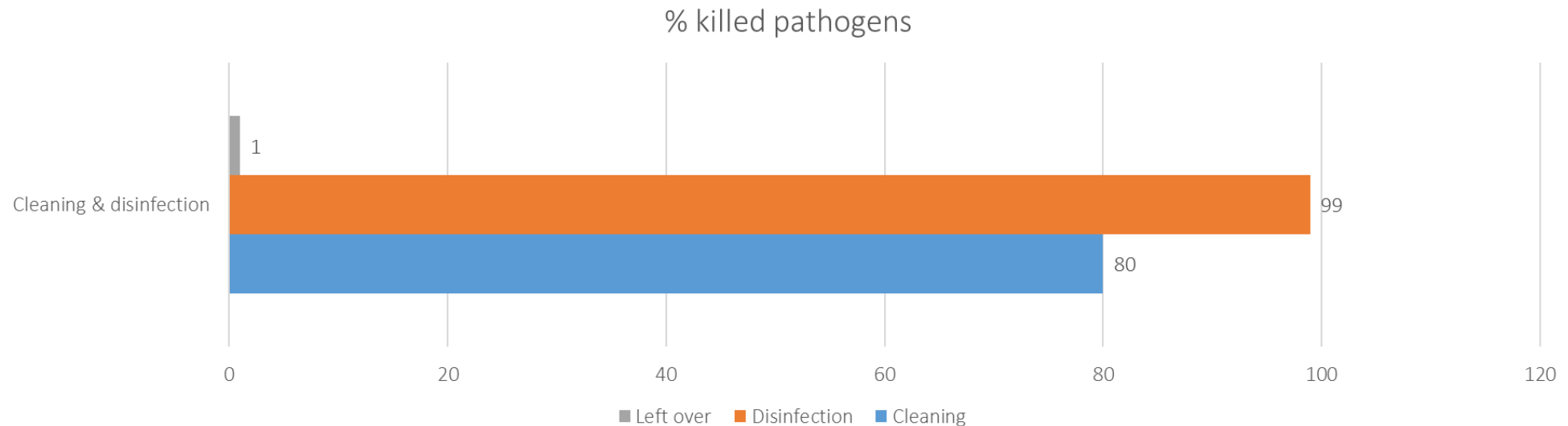
- Entrance hygiene
- Equipment hygiene
- Transport



CLEANING & DISINFECTION

Cleaning & disinfection procedures are fundamental for pathogen inactivation

Cleaning is most important step, can remove > 90 % of microorganisms!



KEY PARAMETERS TO CHOOSE CLEANING & DISINFECTION PRODUCTS

- Type of surfaces to clean & disinfect
 - Spectrum of activity
 - Ease of use & handling
 - Safety (environment, materials, animals & users)
 - Storage
 - Application (concentration, contact time, temperature, pH)
 - Efficacy
- Every country has approved and/or authorized a list of biocides effective against AI
- Only authorized biocides should be used & applied!

HOW TO PROPERLY CLEAN & DISINFECT?

Thorough cleaning & disinfection of all premises

CLEANING



STEP 1 Dry cleaning

Take away all rests of manure. The manure and litter should be removed out of the barn, and if possible immediate transported outside the farm site.



STEP 2 Clean water system (inside)

The water system must be cleaned before the animal house is cleaned.



STEP 3 Soak with water, remove most of dirt

Soaking with water for 4-6 hours improve the cleaning results



STEP 4 Clean ventilation fans and air inlets.

Using detergent clean ventilation fans and air inlets.



STEP 5 Using detergent clean ceilings

The first thing that must be cleaned inside the barn is the ceiling and the ventilation shafts. If this is not done first, the dirt can recontaminate other parts of the building.



STEP 6 Using detergent clean outside of feeding and water system

Feeding pans should be dismantled and cleaned properly to remove all the residues of feed and organic matter.



STEP 7 Using detergent clean floor and walls.

Apply the detergent on the entire house structure; ceiling, walls, curtains, fans and equipment and let the building soak.



STEP 8 Rinse all surfaces with clean water, remove excess of water and let dry.

HOW TO PROPERLY CLEAN & DISINFECT?

Thorough cleaning & disinfection of all premises

DISINFECTING



STEP 1

A good disinfection starts with a well cleaned and dry animal house



STEP 2

Spraying or foaming



STEP 3

Close the animal house completely. Make sure that nobody is left in the house



STEP 4

Fogging. Leave the house closed during 24h.



STEP 5

Ventilate the house to refresh the air, before bringing animals in.

TIPS & TRICKS IN BUILDINGS

Good practices;

- All-in/all-out system, all the same age on the farm
- What to clean & disinfect?
 - ceiling, walls, floor,
 - pipelines,
 - feeding troughs,
 - drinking nipples,
 - other equipment

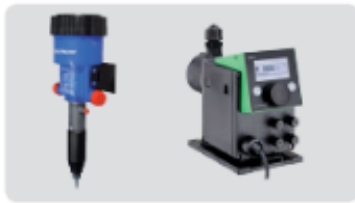
HOW TO PROPERLY CLEAN & DISINFECT DRINKING WATER SYSTEMS?

Thorough cleaning & disinfection of the drinking water system (drinking water lines & drinking nipples)



STEP 1

Removing biofilm and scale all sanitising the innerside of pipes.



STEP 2

Set the required dilution rate using a dosing pump.



STEP 3

Drain water at end of the drinking line until the product solution has reached the end point.



STEP 4

2-4 hours contact time.



STEP 5

Flush the debris out of the drinking lines with water.



STEP 6

Check if the drinking nipples are functioning well before introducing new animals.

TIPS & TRICKS IN DRINKING WATER SYSTEMS

Good practices:

- Cleaning & disinfection after every production cycle
- Take regular drinking water samples:
 - At the source
 - At the end of the drinking water line
- What to clean & disinfect?
 - Drinking water lines
 - Drinking water nipples
- Drinking water disinfection during production, to control the water quality

HOW TO PROPERLY CLEAN & DISINFECT?

Thorough cleaning & disinfection of vehicles



STEP 1

Entering the premises

Disinfection bow, wheel bath, wheel mats, ...



STEP 2

Dry cleaning after unloading

Take away the remaining dirt.



STEP 3

Foam cleaning

Foam interior, exterior, wheels, equipment, loading bay. ... Use Fenosan 1% or Biosale 2-3%, contact time: 15-30 minutes



STEP 4

Rinsing

Rinse with high pressure and water



STEP 5

Let it dry!



STEP 6

Disinfection

Spray or foam interior, exterior, wheels, equipment, loading bay. ... Use Virucid 0.5% and let it dry.

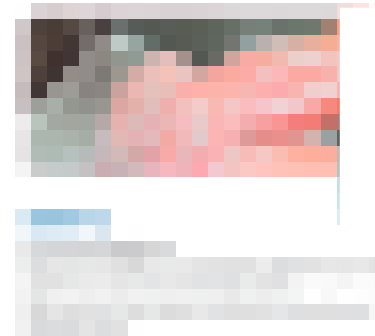


STEP 7

Cabine cleaning and disinfection

Dry clean the pedals, carpets, steering wheel, steps and seats with a hand brush.

Disinfect the pedals, carpets, steering wheel, steps and seats with Virucid 8011.



TIPS & TRICKS IN VEHICLES/good cleaning & disinfection practices

- **All vehicles**; cars, livestock carriers, feed trucks, carcass transporters, bulldozers, ...
- **All parts** of the vehicle;
 - cabine & equipment
 - wheel dips & spray bows
- **All conditions**;
 - top to bottom
 - pay particular attention in case of cold temperatures
 - forced air fans & heaters for drying

TIPS & TRICKS IN VEHICLES/good movement practices

- **Limited people movement;**
 - truck drivers should never enter the poultry barn
 - clean & dirty areas
 - clear signs for access

- **Limited movement of animals;**
 - Any introduction of animals = risk

- **Limited sources;**
 - Same supplier, validated health status
 - Empty truck
 - Few deliveries = lower risk

HOW TO PROPERLY CLEAN & DISINFECT?

Thorough cleaning & disinfection of all materials & equipment



STEP 1
Dry cleaning
Take away all the remaining dirt.



STEP 2
Foaming
With high pressure after every collecting.



STEP 3
Rinse with water
High pressure cleaner (90-150 bar, 12-30l/min.) and let dry.



STEP 4
Disinfecting
Spray or foam after every collecting.

TIPS & TRICKS IN EQUIPMENT/farm management

- **Farm-specific equipment**
 - Preventive measures for new material supply at the farm (disinfection before entering)
- **Barn-specific equipment**
 - All equipment that will come in contact with poultry
 - Barn specific color codes for buckets, etc.
- **Specific after cleaning & disinfection**
 - In case of AI, items in contact with infected animals, difficult to clean & disinfect → discarded
 - After cleaning & disinfection, store in secure location
- **Specific cleaning & disinfection conditions**
 - Dismantle equipment
 - Manual cleaning & disinfection



ENTRANCE HYGIENE

Personal hygiene; hand hygiene, boot hygiene, clothing hygiene

HAND HYGIENE



Palm to palm.



Right palm over back of left hand and left palm over back of right hand.



Palm to palm with fingers interlaced.



Backs of fingers to opposing palms with fingers interlocked.



Rotational rubbing of right thumb clasped in left palm and vice versa.



Rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa.



Dry your hands.



Disinfect.

BOOT HYGIENE



STEP 1

Dry cleaning (brush)

Take away all rests of manure.



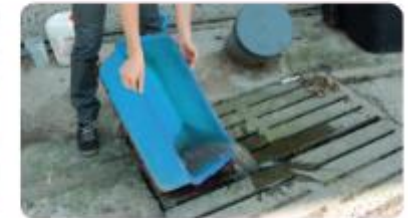
STEP 2

Rinse with water



STEP 3

Disinfect



STEP 4

Renew

Renew the solution regularly: 2-3 times/week

BIOSECURITY ERRORS & EXAMPLES POULTRY

Effect of the area delimitation



Table 4

Number of visits (percentage of visits) when the delimitation between the contaminated and clean areas was not respected according to the type of area delimitation for eight poultry farms in Quebec based on video surveillance.

Type of area delimitation	Number of erroneous visits	%
Red line	321/436	73.6
Bench	16/66	24.2
Door	18/84	21.4
Footbath	240/297	80.8



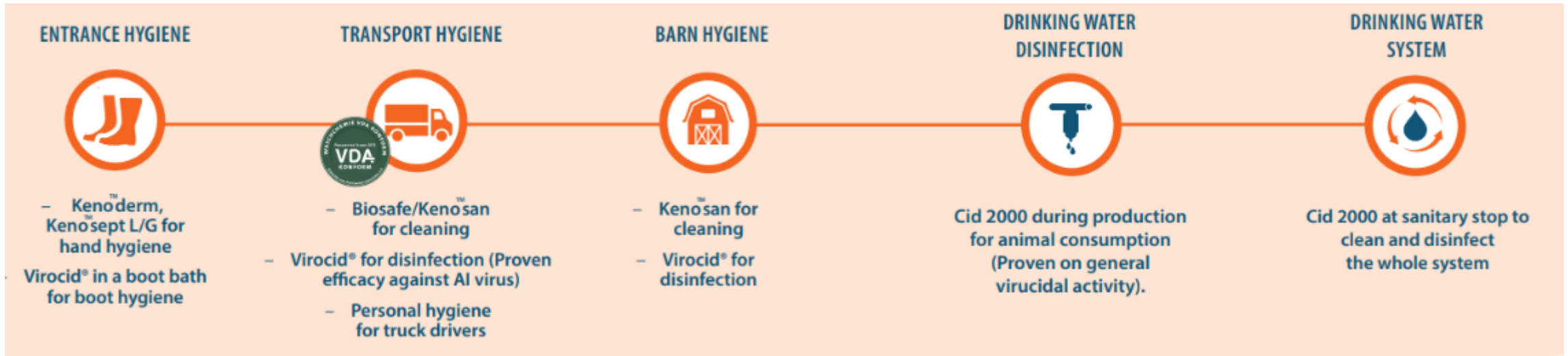
TIPS & TRICKS PERSONNEL/good entrance practices

- **Clear visual instructions & equipment;**
 - Color codes
 - available PPE
 - Proper & clean washing facilities
 - Warm water
 - Clean boot bath
 - Washed & disinfected clothing
- **Clear process;**
 - Set clear rules, no confusion
 - One-way direction/flow
- **Clear guidance for everybody;**
 - EVERY person = VISITOR
 - Owner should follow the same rules, no exceptions



OUR SOLUTION, OUR AI PROGRAM

Focussing on different transmission routes!

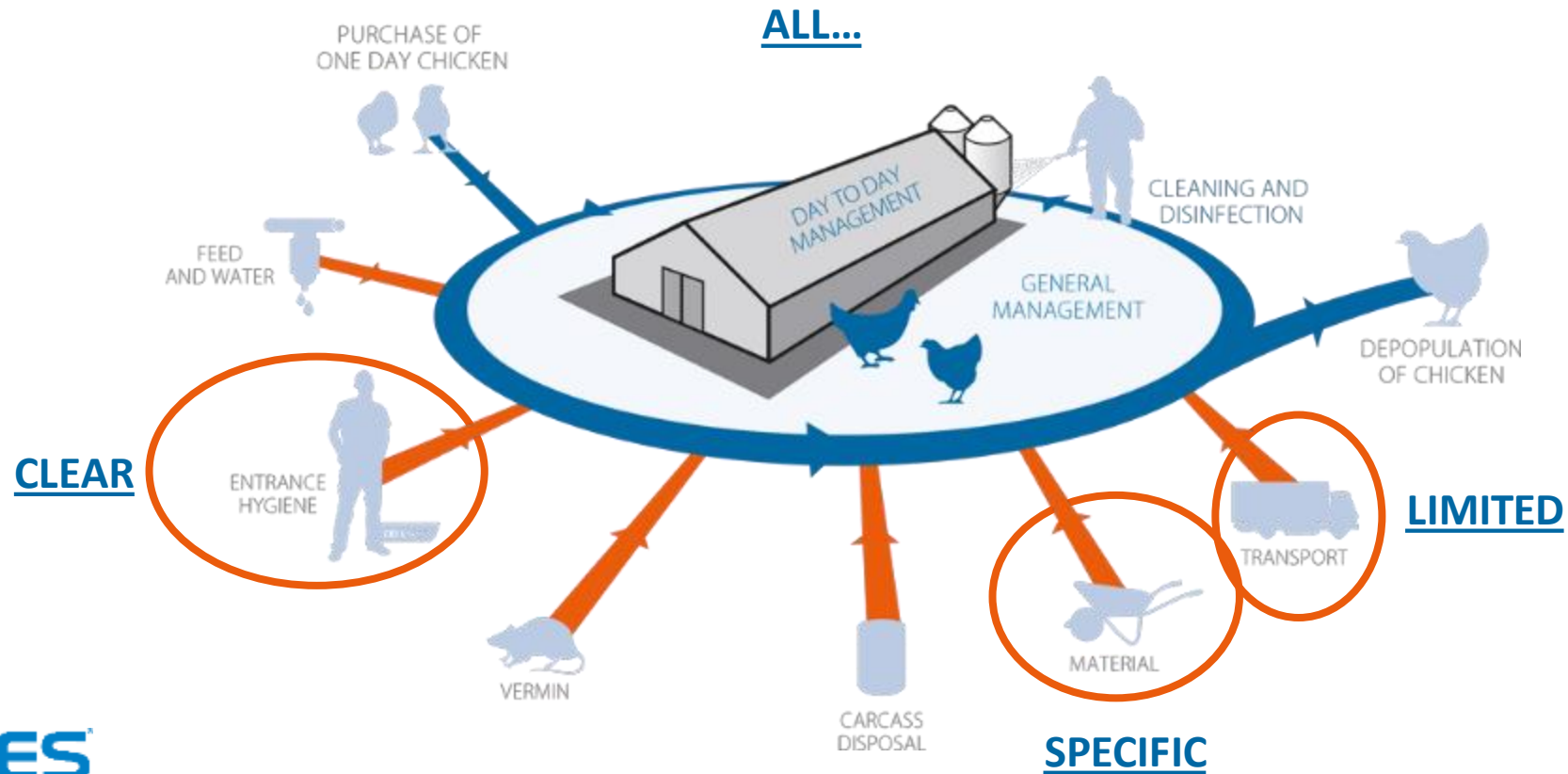


02 CONCLUSION

TAKE HOME MESSAGES

Many disease outbreak investigations have reported **biosecurity shortcomings** as a critical element for virus introduction and spread.

So, keep these 4 key-words in mind;



THANK YOU FOR YOUR ATTENTION

QUESTIONS?