DuPont™
Avian Influenza Biosecurity Precautions

Avian Influenza (Fowl Plague) is a potentially devastating disease, predominantly of chickens and turkeys, although the virus can also affect game birds (pheasants, partridge and quail), ratites (ostrich and emu), psittacine and passerine birds.

Avian Influenza is caused by an orthomyxovirus, or influenza virus and can survive for considerable lengths of time outside of the host and birds are infected through contact with other birds, mechanical vectors such as vehicles and equipment and personnel travelling between farms, markets and abattoirs.

Precautionary requirements established by the UK's Department for Environment, Food and Rural Affairs (DEFRA) determined that effective cleaning and disinfection of premises and the establishment of a Biosecurity barrier helps to prevent the spread of disease.

DuPont Animal Health Solutions (DAHS) specializes in the environmental control of highly infectious diseases like Avian Influenza. Four of DAHS disinfectants have been independently tested and approved effective against the Avian Influenza virus:

Disease	Infectious Organism	Independent Test Approvals	Dilution Rate
Avian Influenza	Orthomyxovirus	Virkon® S	1:320
		904™	1:256
		Hyperox®	1:200
		BioPhene™	1:256

The independently tested and approved dilution rates for DAHS disinfectants clearly show the effectiveness of the products for killing the Avian Influenza virus. However, in practice one must bear in mind farm conditions, in particular the heavy organic challenges and broad range of potential disease causing organisms. For this reason we recommend that the above disinfectants are used at a dilution rate of 1:100.

DAHS disinfectants have been used globally in the fight against Avian Influenza.

Visit www.ahs.dupont.com to view the independent recommendations and efficacy data.

How can farms in an area where Avian Influenza has been identified reduce the risk of contracting the disease?

Put a continuous biosecurity programme into place to prevent Avian Influenza from entering your farms environment:

Preventative Biosecurity

When considering an effective continuous biosecurity programme, it is essential to bear in mind that the Avian Influenza virus can survive for considerable lengths of time outside of the host and birds can be infected through a number of vectors:

- Contact with other birds, including wild birds
- Contact with mechanical vectors such as vehicles and equipment
- Contact with personnel

1. Establish a secure Biosecurity perimeter to ensure that the site is limited to one combined entrance and exit, providing a means of contact between the site entrance and the farm house/office e.g. a bell or whistle for essential callers.

2. Minimize the number of visitors and where possible provide farm only boots and overalls.

3. Put a shower-in policy into place and provide hand-washing facilities (DAHS Hand Hygiene System & SAFE™ Instant Hand Sanitizer).

4. Provide foot and wheel dip baths filled with an approved disinfectant (Virkon® S at 1:100) and ensure that the disinfectant is changed on a daily basis.

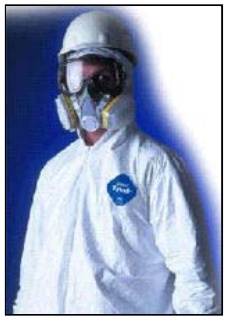
5. Ensure that all vehicles have been cleaned and disinfected (DAHS Vehicle Biosecurity Programme) prior to arrival at site.

6. Only allow essential vehicles to enter with all others (staff, service vehicles etc) being kept outside the Biosecurity perimeter.

7. Disinfect Loading Bays, Paths and Roadways with an approved disinfectant (DAHS 904™, Hyperox® or Virkon® S at 1:100 dilution).

8. Housings and Farm Building Cleansing and Disinfection:

   a. Personnel must be provided with and wear personal protective equipment prior to commencing the cleaning and disinfection procedure. The equipment should comprise of; respirator face mask, eye protection, coveralls, heavy duty rubbers gloves and rubber or polyurethane boots.

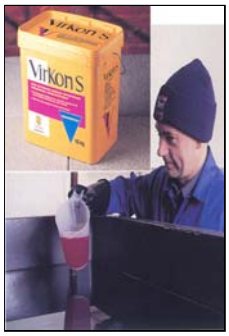


b. Remove all equipment and dry clean the inside of the building/housing.

c. Dispose of all litter and debris as far away from the building as possible.

d. Apply a heavy duty cleaner (Biosolve® or Universal Barn Cleaner™ at 1:100) to all internal surfaces at low pressure and leave for 20-30 minutes to penetrate dirt, muck etc.

e. Rinse using clean water, pressure wash all surfaces.



f. Sanitise the water system within the building/housing with an approved disinfectant (Virkon® S at 1:100) leaving it for 30 minutes and then flush the system through with clean water.

g. All equipment removed from the building must be thoroughly cleaned (Biosolve® or Universal Barn Cleaner™ at 1:100 leave 20-30 min), rinsed with clean water and then disinfected (DAHS 904™, Hyperox® or Virkon® S at 1:100 dilution).

h. Using either a knapsack sprayer or pressure washer apply disinfectant (DAHS 904™, Hyperox® or Virkon® S at 1:100 dilution) to all internal surfaces, paying particular attention to corners, cracks and seams. Allow to dry thoroughly.

i. The farm buildings, loading bays, paths etc should then be treated with disinfectant (DAHS 904™, Hyperox® or Virkon® S at 1:100 dilution), leaving it to soak for at least 30 minutes before rinsing with clean water.

j. Once the building/housing has been thoroughly cleaned and disinfected, replace equipment and lay new bedding if appropriate. The building may now be fogged with disinfectant (DAHS Hyperox®, Virkon® S at 1:100) to control any infection that may have been brought in with these new items.

9. Put an effective rodent control programme into place.

10. Bird proof your poultry house – block up holes or inlets where wild birds can gain entry to your poultry shed (see “Protecting poultry against wild birds” below) .

11. Provide staff training and raise awareness of biosecurity issues.

Effective cleansers and disinfectants are essential to the success of the continuous biosecurity programme for prevention against Avian Influenza. Use a DAHS heavy-duty cleaner such as Biosolve® or Universal Barn Cleaner™ to clean buildings and equipment. Then disinfect using one of DAHS independently tested disinfectants such as Virkon®S, effective at high and low temperatures with proven biocidal activity against spores, bacterial, fungal and viral organisms

Protecting poultry against wild birds

Wild birds should not be killed to fight bird flu, put an effective control and surveillance system into place to ensure that contact between wild birds and poultry is avoided or at least monitered. Ensure that poultry pens and poultry drinking water supplies cannot be contaminated by migrating birds. If this cannot be done, then make the drinking water safe, by appropriate treatment, is necessary. Following the thorough cleaning and disinfection of the water system, Virkon®S, at a dilution of 1:1000, can be added to drinking water at the header tank or through a dosing system (please see country specific label claims with regard to adding disinfectant to drinking water systems). This precaution will help prevent the water supply from acting as a vector for the transmission of the disease.

For Further Information on Emergency Disease Control and DuPont Animal Health Solutions biosecurity products and services visit the largest web based biosecurity resource:

www.ahs.dupont.com

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