RADICAL WATERS
Natural Hygiene Solutions

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Radical Waters and Avian Influenza FAQ's

1. **What is Avian Influenza?**
   Avian Influenza (AI) or Bird flu is a type of virus that affects several species of birds such as chickens, turkeys, geese, guinea fowl and wild birds. There are many strains of AI viruses that can be classified into two categories: low pathogenic (LPAI) that causes little or no clinical signs in birds and highly pathogenic (HPAI) that can cause severe clinical signs and/or mortality in birds. The current outbreak of Bird flu in South Africa is caused by the highly pathogenic H5N8 virus strain.

2. **What is the source of the disease and how does it spread?**
   Wild birds are known as reservoirs for AI viruses and can carry the viruses in their respiratory or intestinal tracts and usually do not get sick.

   AI viruses can be spread through direct contact with secretions from infected birds, especially faeces or through contaminated feed, water, equipment and clothing. AI viruses are also readily transmitted from farm to farm by the movement of domestic live birds, people (shoes and clothing), contaminated vehicles, equipment, feed and cages.

3. **What can be done to prevent the disease from entering my farm?**
   For poultry keepers, strict biosecurity measures need to be observed to prevent introduction of the virus to the flock. Biosecurity measures that are recommended at farm level include:
   - Keeping poultry away from wetlands and areas frequented by wild birds;
   - Farmers must not provide food, water or shelter on properties that may attract wild birds;
   - Controlling people access and equipment to poultry houses;
   - Maintaining sanitation of property, poultry houses and equipment;
   - Avoiding the introduction of birds of unknown disease status into flocks;
   - Reporting illness and death of birds to state veterinarians for immediate investigation and;
   - Disposal of manure and dead poultry in a safe way.

4. **How can the Radical Waters Anolyte assist in preventing the disease from entering my farm?**
   A proper sanitation programme needs to be followed as part of the prevention strategies of the farm. This should be coupled to good biosecurity practices as per above. Proper sanitation and biosecurity cannot be over emphasized; they are the first line of defence against AI. All methods for preventing and controlling the spread of AI are related to controlling the contamination of equipment and personnel.

   The Radical Waters ECA Anolyte disinfectant can be used to sanitise the following areas on the farm to prevent the disease from entering the flocks:
   - Dosing the Anolyte into the drinking water of the birds
   - Treating the bulk water supply to the birds with Anolyte

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- Having a disinfection station at the entrance of the farm to disinfect trucks, people and equipment entering the farm.
- Disinfecting of the bird cages/crates used for transport
- Fogging the Anolyte into the bird houses/barns
- Disinfecting workers clothes with Anolyte
- Disinfecting workers boots with Anolyte – at a boot washing station
- Disinfecting workers hands with the Anolyte
- Disinfecting the floors, walls and surfaces of the bird houses.
- Disinfecting all equipment that is in contact with birds or that come into the farm from the outside.

5. Once the disease is on my farm, how can I use the Anolyte disinfectant?

Once the disease is diagnosed on the farm, the use of the ECA Anolyte disinfectant is geared towards the prevention of spreading the disease to other farms. The focus should be on decontamination and disinfection of personnel and property that has been in contact with the infected birds. This includes all areas mentioned above in point 4 above.

6. Is Anolyte effective against Avian Influenza?

AIV is very sensitive to most detergents and disinfectants. In general, on the basis of their resistance to chemical agents, viruses can be divided into three categories (A, B and C) according to the presence/absence of lipids on the virus particle and size of virus. Avian influenza viruses belong to category A, which is the easiest to deactivate and can be deactivated by all of the major classes of disinfectants, if used properly including pH, concentration, temperature ,organic matter and time of exposure.

Lab studies and limited field studies conducted through the University of Cairo in Egypt revealed that the Anolyte disinfectant at 4mg/l was very effective in complete destroying of H5N1 virus after 10 min exposure at 25°C. It was also shown that the Anolyte was superior for the complete deactivation of high pathogenic avian influenza virus in comparison to other disinfectants used.

In animal husbandry, the requirements for a disinfectant is very high, as a lot of factors such as high organic soiling even after proper cleaning, different materials with often porous surfaces, low temperatures and short contact times can negatively influence its efficacy.

7. References and Published articles:

1. Effect of Disinfectants on the recovery, titer and viral RNA of highly pathogenic Avian Influenza Virus H5N1
2. The effect of some physical and chemical agents on the infectivity of the highly pathogenic avian influenza virus in Egypt
3. Effect of Disinfectants on highly pathogenic avian influenza virus in lab and poultry farms
4. Avian Inlfuenza Fact Sheet