THE BROAD SPECTRUM
VIRUCIDAL, BACTERICIDAL, FUNGICIDAL
DISINFECTANT AND CLEANER

APVMA Approval Number: 65691/51590
(Australian Pesticides and Veterinary Medicines Authority)
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If you ask poultry producers what damage viruses can do to their business, they will think mostly about major diseases such as Avian Influenza, Gumboro disease or respiratory infections such as Infectious Bronchitis virus.

- Viral diseases can reduce flock performance, productivity and profits without appearing as overt clinical disease
- Viruses are therefore potentially more important than bacterial infections
- Effects of viruses include: stunting, gut disease, malabsorption, respiratory disease syndromes and immune suppression
- Effective vaccination programmes require healthy immune systems
- Viral diseases are common, insidious, persistent and require a structured biosecurity programme using the proven virucidal disinfectant ViralFx™.

However, this is merely the tip of the iceberg. Viral challenges can be the triggers for a whole range of problems which may never even appear as clinical disease but can have an even more devastating effect on overall flock performance, production and profits.

**DISEASE FACTORS**

Poultry disease can affect one or more of the bird’s body systems, the most significant of which are:

- Respiratory tract (lungs and air sacs)
- Skeletal system (bones and joints)
- Intestinal tract (affecting gut function).

Although other factors such as environment, nutrition and management play an important role in the full expression of diseases affecting these systems, the most significant underlying trigger is usually an infectious agent, and the most potent of these are undoubtedly viruses.

Viruses do their damage by causing primary tissue damage or by opening the gates for other infectious agents, such as bacteria and Mycoplasmas, which might also be present just waiting for a chance to act. And if that wasn’t enough, a number of avian viruses can take this insidious yet highly damaging effect up to another level by directly attacking the birds’ immune system. This can cause clinical problems in its own right or prevent the bird from recognising other harmful agents. It can also prevent birds from responding to the increasing number of vaccinations given to a range of birds.
So why are viruses potentially more important than bacteria and other infectious agents?

The first is their frequency. Common things are common. Poultry species can be exposed to a wide variety of viruses, even on high health status farms. Viruses can persist in the farm environment and diagnostic tests can be laborious, expensive and may make detection difficult.

The next important factor is their impact. Primary viral infections can open the way for other secondary bacterial infections to cause ongoing chronic and severe performance losses.

Finally, all these aspects make viruses difficult to control. Being subclinical and undetected, they can spread easily. They are not treatable with antibiotics. Viruses can therefore build up on farms especially if they are multi age and this can put too large a burden on vaccines which are considered by some to be the only effective defence against viruses. However, these vaccines can only work to their full potential if the majority of birds in a flock have an immune system that can respond to the vaccine and produce a robust and long lasting immunity.

VIRAL EFFECTS

One of the most economically significant diseases of the turkey industry in recent years has been the Poult Enteritis Mortality Syndrome (PEMS). This disease can cause mortality rates up to 80 per cent and severe clinical stunting problems, poor growth and high levels of culling of birds that cannot reach market weight. Some flocks have been totally destroyed by this syndrome.

Control of these viruses by terminal cleansing and disinfection using a ViralFx™ virucidal programme has been shown to be the only truly effective measure against this syndrome.

- Respiratory disease syndromes are usually complex interactions of an assortment of infectious agents. Classically, Chronic Respiratory Disease (CRD) in broilers was associated with Infectious Bronchitis virus, Newcastle disease virus, Mycoplasma and E.coli working in tandem. In turkeys, Avian Pneumovirus (Turkey Rhinotracheitis virus), Newcastle disease virus, Mycoplasmas, Ornithobacter rhinotrachealae (ORT) and E.coli are involved in a number of respiratory complexes.

- Marek’s disease virus causes direct and indirect economic losses through this damage to the immune system. There may be direct mortality or increased susceptibility to common bugs such as E.coli.

- Gumboro disease virus can result in transient or long lasting damage to tissues of the Bursa of Fabricius, the organ of the bird that is the cornerstone in producing antibodies and defence against disease.

- Broiler flocks affected by clinical Chick Anaemia Virus (CAV) infection from a vertically transmitting parent flock had a net income lower by 17% lower, average slaughter weight 3.3% lower and mortality rate 2% higher than that recorded in unaffected flocks. Other work suggests that the depression of average weight can be as much as 12.8 per cent.

Where do we go from here?

The variety of viral agents involved coupled with their frequency and persistence means that controlling viruses must be the foundation for any disease control Biosecurity programme for poultry farms.

Although there is an armoury of vaccines available, effective measures are available with attention to structured and targeted cleansing and disinfection using disinfectant products with a proven virucidal pedigree.

In a number of livestock species, ViralFx™ has shown itself to be the thoroughbred in virus control with a broad spectrum of activity (including against the secondary bacteria, moulds and fungi), maintaining that activity in the presence of organic challenge.
Poultry Farm Biosecurity and Hygiene

One of the key elements of successful breeder farm management is maintaining good farm Biosecurity. Biosecurity procedures aim to keep birds healthy by reducing the chance of disease getting onto the farm, spreading between sheds, or being passed between batches within the same shed.

Biosecurity measures on breeding farms include:
- shower-on, shower-off (including washing hair) for all personnel and visitors
- a complete change of clothes in the shower facility
- strict control of visitor movements
- wild animal-proof security fencing
- locked security gates
- bird, vermin and animal proofed sheds
- treated water supply
- full cleanout and decontamination of sheds between batches
- restrictions placed on entry of feed and other vehicles to the property
- full sanitation and fumigation of any equipment entering the farm
- no staff or visitors to the farm to have had any contact with other poultry for 72 hours
- footwear changed between sheds;
- hands washed or gloves changed between sheds

When a breeder flock is removed from a shed, the shed and all equipment in it is rigorously cleaned and disinfected with ViralFx™. The shed is then left empty for about three weeks before a new flock is placed to ensure that it is clean and ready for the next flock.

Conclusions

Viruses are common, insidious and remarkably persistent. Despite the availability of a range of high quality vaccines, their efficacy is enhanced by effective reduction in viral load on farms.

ViralFx™ has proven efficacy against a spectrum of viral challenges expected on poultry farms when used effectively as part of a structured Biosecurity programme.
POULTRY PRODUCTION - Virucidal Efficacy

The efficacy table below addresses specific diseases related to poultry production.

<table>
<thead>
<tr>
<th>Poultry Diseases</th>
<th>Virus Family</th>
<th>ViralFx™ Dilution Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Egg drop syndrome (EDS)</td>
<td>Adenoviridae</td>
<td>1:100</td>
</tr>
<tr>
<td>Poultry enteritis mortality syndrome (PEMS)</td>
<td>Astroviridae</td>
<td>1:67</td>
</tr>
<tr>
<td>Infectious bursal disease (Gumboro)</td>
<td>Birnaviridae</td>
<td>1:250</td>
</tr>
<tr>
<td>Chicken anaemia virus (CAV)</td>
<td>Circoviridae</td>
<td>1:250</td>
</tr>
<tr>
<td>Infectious bronchitis</td>
<td>Coronaviridae</td>
<td>1:100</td>
</tr>
<tr>
<td>Marek's disease</td>
<td>Herpesviridae</td>
<td>1:200</td>
</tr>
<tr>
<td>Turkey rhinotracheitis (TRT)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Infectious laryngotracheitis (ILT)</td>
<td></td>
<td>1:200</td>
</tr>
<tr>
<td>Avian influenza H7N1</td>
<td>Orthomyxoviridae</td>
<td>1:320</td>
</tr>
<tr>
<td>Avian Influenza H5N1</td>
<td>Orthomyxoviridae</td>
<td>1:800</td>
</tr>
<tr>
<td>Newcastle disease (NDV)</td>
<td>Paramyxoviridae</td>
<td>1:280</td>
</tr>
<tr>
<td>Fowl pox</td>
<td>Poxviridae</td>
<td>1:100</td>
</tr>
<tr>
<td>Avian reovirus</td>
<td>Reoviridae</td>
<td>1:100</td>
</tr>
<tr>
<td>Myeloid leucosis</td>
<td>Retroviridae</td>
<td>1:200</td>
</tr>
</tbody>
</table>
### POUlTRY PRODUCTION - Bactericidal Efficacy

The efficacy table below addresses specific diseases related to poultry production.

<table>
<thead>
<tr>
<th>POUlTRY DISEASE</th>
<th>PATHOGEN</th>
<th>ViralFx™ DILUTION RATE</th>
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</thead>
<tbody>
<tr>
<td>Food poisoning - humans</td>
<td>Bacillus cereus</td>
<td>1:100</td>
</tr>
<tr>
<td>Coryza in turkeys</td>
<td>Bordetella avium</td>
<td>1:100</td>
</tr>
<tr>
<td>Spirochaetosis</td>
<td>Brachyspira pilosicoli</td>
<td>1:100</td>
</tr>
<tr>
<td>Spirochaetosis</td>
<td>Brachyspira hyodysenteriae</td>
<td>1:100</td>
</tr>
<tr>
<td>Food poisoning – humans</td>
<td>Campylobacter coli</td>
<td>1:100</td>
</tr>
<tr>
<td>Food poisoning - humans</td>
<td>Campylobacter jejuni</td>
<td>1:100</td>
</tr>
<tr>
<td>Food poisoning - humans</td>
<td>Campylobacter pyloridis</td>
<td>1:100</td>
</tr>
<tr>
<td>Psittacosis</td>
<td>Chlamdophila psittaci</td>
<td>1:100</td>
</tr>
<tr>
<td>Necrotic enteritis</td>
<td>Clostridium perfringens</td>
<td>1:100</td>
</tr>
<tr>
<td>Dermatitis</td>
<td>Erysipelothrix rhusiopathiae</td>
<td>1:100</td>
</tr>
<tr>
<td>Enteritis</td>
<td>Escherichia coli</td>
<td>1:100 -1:200</td>
</tr>
<tr>
<td>Food poisoning - humans</td>
<td>Escherichia coli O157:H7</td>
<td>1:100</td>
</tr>
<tr>
<td>Embryo mortality</td>
<td>Klebsiella pneumoniae</td>
<td>1:200</td>
</tr>
<tr>
<td>Food poisoning - humans, Septicaemia in poultry</td>
<td>Listeria monocytogenes</td>
<td>1:100</td>
</tr>
<tr>
<td>Chronic Respiratory Disease</td>
<td>Mycoplasma gallisepticum</td>
<td>1:100</td>
</tr>
<tr>
<td>Respiratory diseases</td>
<td>Ornithobacterium rhinotracheale (ORT)</td>
<td>1:100</td>
</tr>
<tr>
<td>Cholera</td>
<td>Pasteurella multocida Fowl</td>
<td>1:150</td>
</tr>
<tr>
<td>Secondary infections</td>
<td>Proteus mirabilis</td>
<td>1:200</td>
</tr>
<tr>
<td>Respiratory infection, Septicaemia</td>
<td>Pseudomonas aeruginosa</td>
<td>1:100</td>
</tr>
<tr>
<td>Paracolon infection in Turkeys</td>
<td>Salmonella arizona</td>
<td>1:100</td>
</tr>
<tr>
<td>Food poisoning – humans</td>
<td>Salmonella choleraesuis</td>
<td>1:120</td>
</tr>
<tr>
<td>Food poisoning – humans</td>
<td>Salmonella enteritidis PT4</td>
<td>1:100</td>
</tr>
<tr>
<td>Food poisoning – humans</td>
<td>Salmonella hadar</td>
<td>1:200</td>
</tr>
<tr>
<td>Food poisoning – humans</td>
<td>Salmonella infantis</td>
<td>1:200</td>
</tr>
<tr>
<td>Food poisoning – humans</td>
<td>Salmonella thomasville</td>
<td>1:200</td>
</tr>
<tr>
<td>Septicaemia in Chickens</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Food poisoning – humans</td>
<td>Salmonella typhimurium DT104</td>
<td>1:200</td>
</tr>
<tr>
<td>Food poisoning – humans</td>
<td>Salmonella virchow</td>
<td>1:200</td>
</tr>
<tr>
<td>Arthritis and septicaemia in turkeys</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Omphalitis in chicks</td>
<td>Staphylococcus aureus</td>
<td>1:100</td>
</tr>
<tr>
<td>Septicaemia in poultry</td>
<td>Streptococcus zooepidemicus</td>
<td>1:100</td>
</tr>
</tbody>
</table>
POULTRY PRODUCTION - Fungicidal Efficacy

The efficacy table below addresses specific diseases related to poultry production.

<table>
<thead>
<tr>
<th>POULTRY DISEASE</th>
<th>PATHOGEN</th>
<th>ViralFx™ DILUTION RATE</th>
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<tr>
<td>Aspergillosis (hatchery)</td>
<td>Aspergillus fumigatus</td>
<td>1:100</td>
</tr>
<tr>
<td>Aspergillosis</td>
<td>Aspergillus niger</td>
<td>1:100</td>
</tr>
<tr>
<td>Infections of the oesophagus and crop</td>
<td>Candida albicans</td>
<td>1:100</td>
</tr>
<tr>
<td>Dermatophytosis</td>
<td>Microsporum canis</td>
<td>1:300</td>
</tr>
<tr>
<td>Dermatophytosis</td>
<td>Trichophyton mentagrophytes</td>
<td>1:150 - 1:300</td>
</tr>
</tbody>
</table>

ViralFx™ is a fast-acting disinfection, at a dilution rate of 1:100, has proven efficacy against E. Coli, Salmonella arizona, Staphylococcus aureus, Avian poxvirus, Avian reovirus, Infectious Bursal disease virus and Newcastle disease virus.

Water Quality and Broiler Performance

Algae, bacteria, rust, and other contaminants can build up on the inner surfaces of poultry house water lines over time. Poultry growers are incorporating some form of organic acids to their water-system flushing procedures, to suppress bio-film formation in the water lines, this procedure will reduce harmful bacteria, improve animal performance as well as food safety.

Poultry producers maintain secure storage facilities to protect the quality of the feed delivered to their birds. Although feed quality has received much attention, the quality of the water that birds drink is often overlooked.

It is a well known fact that birds consume more water than they consume feed. In some aspects, water quality can have a greater negative effect on bird performance than feed quality. Water contaminated with microorganisms, algae, dust, and rust -- is relatively common and can have a profound adverse impact on poultry performance.

More than 35 percent of privately owned individual drinking water supplies – are contaminated with coliform bacteria. The microorganisms can enter a water supply from a variety of sources including sewage, animal wastes, or dead animals.

Iron bacteria do not cause disease, but do form a reddish-brown slime that coats the inside of pipes, fouls pumps, and clogs waterers. All of which represent a major challenges for poultry growers.

Algae are another type of microorganism that contaminates poultry water supplies. Some algae produce compounds which are toxic to poultry. In extreme cases, algae-produced compounds cause offensive flavors - described as “muddy” or “plastic” in poultry meat.

In addition, some non-pathogenic bacteria and algae impart an offensive odor or taste to the water, which in turn results in water refusal, leading to a drop in feed intake and poor bird performance.

A major contributing factor to the presence and intensity of bacteria or algae contamination in poultry drinking water is the amount of dissolved nutrients like phosphorus and nitrogen in the water. These nutrients facilitate the growth of bacteria and algae through a biological process known as eutrophication.

Over time, eutrophication can progress to a point where the bacteria or algae form a visible slime layer or bio-film on the inside surface of water pipes.

Poultry growers find that water-borne bacteria and algae are difficult to kill. Common disinfectants and sanitizers cannot penetrate or degrade the cell wall. Bio-films provide bacteria and algae with additional protection from chemical assaults.
Most of the broiler growers are of the opinion that drinking water treatment – acidification or chlorination is one of the most effective ways of controlling microorganisms in poultry operations – higher than the effectiveness of vaccines and direct-fed microbials.

Citric acid is an organic acid commonly used by poultry producers for acidifying their water. Citric decreases the pH of the water quickly. Lower pH allows sanitizers to be more effective against certain microorganisms. However, citric acid does not have good antimicrobial activity.

Good water quality is essential for efficient poultry house production but frequently water quality on farms can be poor and can act as a medium for the infection by pathogens. Poor water quality impacts on animal health, productivity and welfare. Biofilms in water systems increase pathogen levels and protect pathogens from disinfectants.

ViralFX™ provides a proven broad-spectrum of activity and can be used in terminal and continuous programmes. When used at dilutions of 1:1000 (0.1%) it is safe and suitable for poultry birds to drink water treated with ViralFX™.

POULTRY AND RATITE PRODUCTION:

CONTROLS:


HATCHERIES:

ViralFx™ at 1% solution can be used for cleaning and disinfecting hatchers, setters, evaporative coolers, humidifying systems, ceiling fans, chicken houses, transfer truck trays, and plastic chick boxes.

ViralFx™ at 1-2% solutions recommended for use in fogging (wet misting) operations as a supplemental measure, either before or after regular cleaning and disinfecting procedures. Fog (wet mist) until the area is moist using automatic foggers according to manufacturer’s use directions.

BROILER / BREEDER HOUSES:

Follow General Instructions to remove poultry and pre-clean area to be treated. Spray floors and walls with ViralFx™ at 1% solution. Thoroughly wash waterers and feeders with a 1% solution of ViralFx™. After contact for 10 minutes, rinse with water. Do not house poultry or use equipment until treatment has dried.

FOR AIR SANITIZING:

Use ViralFx™ at 0.5 -1% solution, and fog until surfaces are moist. Allow at least 2 hours before entering treated area. Rinse foggers and sprayers with water following use.
GENERAL INSTRUCTIONS—POULTRY AND FARM PREMISES

1. Remove all poultry or other animals and feeds from premises, trucks or other vehicles, coops, crates or other enclosures.

2. Remove all litter droppings and manure from floors, walls and surfaces of barns pens, stalls, chutes and other facilities and fixtures occupied or traversed by poultry or other animals.

3. Empty all troughs, racks, and other feeding and watering appliances.

4. Thoroughly clean all surfaces with soap or detergent and rinse with water.

5. Saturate surfaces with the recommended disinfecting solution for a period of 10 minutes.

6. Immerse all halters, ropes, and other types of equipment used in handling and restraining animals, as well as forks, shovels, and scrapers used for removing litter and manure.

7. Ventilate buildings, cars, boats, coops, and other closed spaces. Do not house poultry or livestock or employ equipment until treatment has been absorbed, set, or dried.

8. Thoroughly scrub treated feed racks, mangers, troughs, automatic feeders, fountains, and waterers with soap or detergent, and rinse with potable water before reuse. This powder formula is easily diluted for use in manual or machine operations.

PROCESSING PLANTS:

Spray ViralFx™ at 1% solution to disinfect and clean walls, ceilings and floors.

BENEFITS OF EGG DISINFECTION:

It has been demonstrated widely that egg disinfection improves hatchability, chick uniformity and chick quality. The use of thermal fogging is accepted practice in all hatchery biosecurity programmes.

However many of the products in use today are either toxic (formalin), difficult to handle (formalin), unstable (chlorine) or of limited efficacy (chlorine donors).

This method of disinfectant application can be rapid and does not involve large volumes of liquids in buildings where equipment and eggs are already placed. The drawback of the low volumes that are applied in this way is that there is insufficient penetration of organic matter and porous surfaces: a successful thermal fogging primarily depends on the consistency of the application on eggshells.

The disinfectants commonly recommended for thermal fogging are as the follows:

Formaldehyde/formalin is widely used because it is cheap, but carries major health risks for manpower, eg. skin and mucosal irritation, respiratory problems, asthma, sensitisation and possible carcinogenic effects. Importantly residues on walls can be released several days later and the effects can be cumulative. In view of modern concerns for health and safety the use of this chemical should be strongly questioned.
ViralFx™ is a powdered peroxygen which is made up into solution. Has proven high levels of activity against a wide range of common egg pathogens. It is safe in use for both operators and eggs.

Thermal Fogging:
With the thermal fog system ViralFx™ can be used for a complete disinfection programme in the hatchery. ViralFx™ in an aqueous solution when used through commonly available thermal foggers creates a dense fog which gives a level of disinfection suitable for the final stage in a full biosecurity programme.

Two main advantages:
- Safety:
  The ViralFx™ plus fog enhancer system used as directed creates no toxic hazard to the operators.
- Speed:
  Because it is so safe operators can enter the building as soon as the fog has dispersed.

ViralFx™ Effective Against Super-Resistant Salmonella Strains:

ViralFx™ is free from possible Salmonella resistance build-up and the continued use of an oxidising disinfectant reduces the potential infectivity of these super strains.

There are 286 Salmonella isolates - Of the 286 isolates, the researchers concluded that there were only small variations in the minimum inhibitory concentrations (MICs) – the lowest concentrations of disinfectant required to inhibit the growth of the Salmonella isolates. The best efficacies are with ViralFx™ and the use of an oxidising compound such as ViralFx™ reduced the overall minimum inhibitory concentrations (MICs).
Avian Influenza Threats Vs Biosecurity

The consequences of Avian Influenza are immediate and financially severe. However, with thought and planning, a comprehensive Biosecurity system can be implemented in order to minimise the impact of further catastrophic outbreaks. Since 2004, outbreaks of Avian Influenza have decimated flocks of poultry in many countries, forcing a radical review of Biosecurity measures.

During the devastating Dutch Avian Influenza outbreak, the Dutch veterinary authority (RVV) instigated tough Biosecurity measures to bring the crisis under control.

Transmission of the virus has been strongly linked to moving live birds, contaminated carcasses or litter in vehicles and has highlighted the importance of vehicle-related Biosecurity.

**Vehicle disinfection protocol can help to reduce the potential spread of the virus.**

**The guidelines include:**

- Wash wheels and wheel arches between visits
- Avoid walking onto a farm unless your footwear has been disinfected by use of foot bath or similar
- Use protective clothing as supplied by the farm
- Follow the site’s own Biosecurity instructions
- Clean and disinfect vehicles after each journey, including the driver’s cab
- Use a combination approach to first clean and degrease the vehicle and all contaminated surfaces, followed with the use of a disinfectant with proven activity against the pathogens of concern to the particular enterprise
- Use products with known efficacy in removing biofilms from surfaces. These may be difficult to clean and can harbour and protect many microorganisms
- Wash and disinfect the vehicle at the end of the day

The purpose of such strategies is twofold. In the first instance they will help to deal with the disease emergency as it happens and secondly play a major part in maintaining a high standard of Biosecurity on an ongoing basis.

Avian Influenza has no respect for geographical borders and can affect all species of birds. In order for any control strategy to be implemented effectively, legislators must have a clear understanding of the location and density of flocks per square metre in the region, as well as the exact type of poultry involved (housed versus free range, turkeys versus ducks). This information is critical and needs to be accurately and promptly distributed throughout the industry. It will assist in the swift and effective tracing of animal movement.

There is now an over-riding requirement that all methods of slaughter should be humane and ensure the highest standards of animal welfare. Methods used include lethal injection, which may be feasible in small flocks only, neck dislocation which may be possible in flocks up to 10,000 birds, toxic agents via the feed in which a reduced food intake and palatability problems must be a consideration, and mobile killing lines. The dampening of carcasses and litter with disinfectant prior to removal may help to avoid a further spread.
An infected premises can pose a high risk to neighbouring farms and information gathered from the recent Dutch outbreaks suggest that strong winds and dry weather can be responsible for spreading contaminated dust over a vast area. Spread by faeces or contaminated litter is also considered to be a significant factor and can be aided by air, personnel, vehicles and equipment. Once such risk factors have been identified, it is the responsibility of the poultry producers to rigidly enforce the necessary Biosecurity measures. Methods to consider are:

- Maintain an effective perimeter control
- Implement disinfectant foot dips and protective clothing
- Avoid stock coming into contact with wild birds
- Most importantly, ensure regular and thorough cleaning and disinfection of poultry houses

A disease outbreak such as Avian Influenza will often be accompanied by a ban on animal movement, which if prolonged can create severe welfare problems. Experience has shown that it is vital that plans are put into place to allow for the relaxation of movement restriction as soon as possible. This should be followed by the swift transportation of eggs to hatcheries and packing stations, chicks to hatcheries and farms and commercial stock to processing plants.

It is almost impossible to assess the cost of not implementing Biosecurity measures. With over ten million birds lost in the Dutch Avian Influenza outbreaks the cost exceeded 150 million Euros. In the 1983 Mid-Atlantic outbreak of Avian Influenza, the federal government incurred costs of over $62 million in their efforts to eradicate the disease. Producers lost $200 million due to increased flock mortality. However realistic any compensation system might be, companies both large and small are frequently forced out of business.

The industry needs to be in a constant state of preparedness based on sound and effective Biosecurity.

Broiler Farm
Description: shed of day old chicks.
POULTRY FARM BIOSECURITY AND HYGIENE

One of the key elements of successful breeder farm management is maintaining good farm Biosecurity. Biosecurity procedures aim to keep birds healthy by reducing the chance of disease getting onto the farm, spreading between sheds, or being passed between batches within the same shed.

**Biosecurity measures on breeding farms include:**

- shower-on, shower-off (including washing hair) for all personnel and visitors.
- a complete change of clothes in the shower facility
- strict control of visitor movements
- wild animal-proof security fencing
- locked security gates
- bird, vermin and animal proofed sheds
- treated water supply
- full cleanout and decontamination of sheds between batches
- restrictions placed on entry of feed and other vehicles to the property
- full sanitation and fumigation of any equipment entering the farm
- no staff or visitors to the farm to have had any contact with other poultry for 72 hours
- footwear changed between sheds.
- hands washed or gloves changed between sheds

When a breeder flock is removed from a shed, the shed and all equipment in it is rigorously cleaned and disinfected with ViralFx™. The shed is then left empty for about three weeks before a new flock is placed to ensure that it is clean and ready for the next flock.
POULTRY BREEDER FARM

Breeder Farm - signage re vehicle wash prior to entry to breeder farm.

Breeder Farm - shower-on procedure for all staff and visitors to the farm.
Application of ViralFx™ on vehicle entering the vehicle wash & disinfection unit prior to entering a breeder farm.
Application of ViralFx™ on feed delivery truck entering the vehicle wash-down and disinfection unit before entering a breeder farm.

Clean farm boots are provided after shower-on for wearing onto the farm.
**ViralFx™**
disinfection of farm boots after leaving shower block and before going to sheds.

**ViralFx™**
disinfecting footwear prior to shed entry.
Changing into new boots in the shed vestibule - dedicated footwear is used for each shed on farm. Dedicated footwear is used in each shed - footwear is then disinfected with ViralFx™ before shed entry.

Breeder males and females.
Water storage tanks on the sheds on this farm provide water supplies – using 0.5% of ViralFx™ powder.

Breeders drinking and at nest-boxes.
**ViralFx™** disinfection on footwear prior to entering fertile egg grading room.

**ViralFx™** disinfection footwear prior to entering the fertile egg grading room.

Racks of fertile eggs on farm trolleys in the egg room of breeder farm.
CLEANING UP PROCEDURE FOR NEW BATCH OF CHICKEN BROILERS

Broiler Farm Clean-out and Set-up
Description: spent litter is removed from the shed by front-end loader.

Broiler Farm Clean-out and Set-up
Description: cleaning out litter (sweeping shed floor).

Broiler Farm Clean-out and Set-up
Description: corners and edges of the shed are swept clean of caked on litter.
Broiler Farm Clean-out and Set-up
Description: Walls, ceilings and fittings are cleaned with high pressure **ViralFx™** spray.

Broiler Farm Clean-out and Set-up Description: fresh bedding being spread on the shed floor prior to arrival of a new batch of chicks.

Broiler Farm Clean-out and Set-up Description: cleaned shed with freshly spread bedding.
Broiler Farm Description: shed of day old chicks at feeder pans.
POULTRY HATCHERY

Farm trolley in the hatchery egg room.

Setter racks of fertile eggs in the hatchery fumigation room.

Banks of ‘setters’ or incubators - fertile eggs are incubated in these machines for the first 18 days.
Baskets of eggs in a ‘hatcher’ for the last 3-4 days of incubation.

Baskets of newly hatched chicks about to come out of the ‘hatcher’.

Cleaning & Disinfecting with **ViralFx™** a ‘hatcher’ after removal of newly hatched chicks.
Chick pipping through eggshell.

Newly hatched broiler chicks in chick boxes awaiting dispatch to farms.