



Winter poultry shed viruses

Keeping Rotavirus, Adenovirus and Reovirus under control



Whitepaper
November 2023

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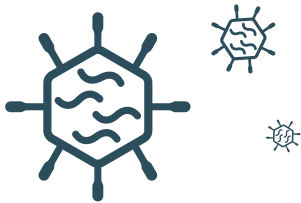


At this time of year, damp conditions in the shed can cause a number of issues for broiler farmers, one of them being a set of viruses that, although ever-present in the shed, become more problematic over the autumn and winter period: **Rotavirus, Adenovirus and Reovirus.**

If these viruses take hold, they can spread quickly and have a serious impact on the healthy growth of the birds, and ultimately on the financial returns of the crop. In this white paper we look at the issues such viruses cause and how to limit their impact.

A brief look at each virus...

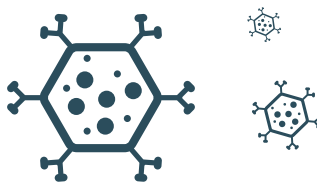
Rotavirus



Avian rotavirus (AvRV) is a major cause of viral gastro-intestinal (GI) disease in birds. The severity of the disease depends on the strain of AvRV, other infections present, maternal antibodies and other environmental factors. Very young birds (1-2 weeks) are highly susceptible, with severe cases of enteritis and diarrhoea leading to mortality.

There is no specific treatment for this infection.

Adenovirus



Adenoviruses are widespread around the world and can be present without any clinical signs of the disease, but they can cause two serious diseases which can result in mortality: inclusion body hepatitis (IBH) and hepatitis hydropericardium syndrome (HHS). Both diseases can cause the liver to become swollen and enlarged and droppings will be liquid and yellow due to excess bile acids.

There is no specific treatment for these conditions.

Reovirus



Avian reoviruses are thought to be responsible for viral arthritis, respiratory infections and cloacal pasting in chicks. Although mortality rates are not high, reoviruses can cause lameness, lesions and swelling and inflammation of the hock joints, as well as lethargy and exhaustion caused by malabsorption of nutrients (this is often called Pale Bird Syndrome or Runting-stunting Syndrome).

There is no treatment for birds severely affected with this syndrome.

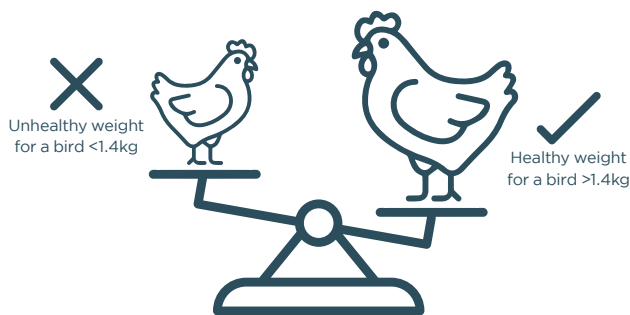
What do these viruses have in common?

Research into these viruses is ongoing and there is still a lot that we don't know about the extent of the conditions that they can cause in a flock.

What we do know is that the three viruses are endemic and tend to affect young birds who haven't had a chance to build up immunity. They spread very quickly and some strains can result in significant mortality rates.

Wet bedding causes secondary problems

A major problem is the severe diarrhoea, which leads to wet bedding, which gives rise to a whole host of other problems, including providing an ideal breeding ground for disease and causing hockburn and pododermatitis. Wet litter softens the skin on the foot pads and hocks of the bird and this can develop into a lesion. As well as being a welfare issue, bad cases of hockburn and pododermatitis can lead to the carcass being downgraded or rejected.



Runting-stunting syndrome

Severe diarrhoea and enteritis also leads to dehydration and malabsorption of nutrients, which results in growth retardation or 'runting-stunting syndrome' of the bird. Failing to make weight means that the bird will never reach the shelves and the effort and expense of raising it will be completely wasted.

Compromised immune systems

Even if the virus itself does not lead to mortality, it can severely compromise the immune system of the bird, making it more susceptible to other infections.



Ways of combatting these viruses

There are no treatments as such for these viruses, so this makes prevention through a strong healthy bird and good biosecurity practices ever important.



Through nutrition

Although these viruses can never be completely eradicated from the shed, given the chance to develop a robust immune system, a bird will have a better chance of fending off the illnesses they cause. A good multi-vitamin supplement such as [Agrivite VitaMix-A](#), containing a broad spectrum of vitamins and amino acids, can provide nutritional support during times of stress, early growth and development. A stronger, healthier bird will be more resistant to disease challenges.

If birds are struggling, an electrolyte supplement can provide a much-needed boost.

For example, [Agrivite Vitalyte](#) contains electrolytes to stimulate water intake and compensate for any dehydration caused by diarrhoea. Betain and glycine aid water absorption, vitamin C helps boost immunity and energy can help to reduce recovery time.

Agrivite VitaMix-A

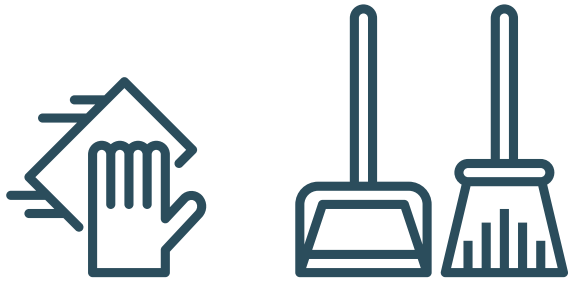


Agrivite Vitalyte



And thorough disinfection

Perhaps the most important step that can be taken to limit these viruses is through biosecurity. A gold standard disinfection programme at the end of each crop is the first line of defence. This is always a top priority for poultry farmers during the autumn/winter period anyway, but it's important to ensure that cleaning programmes are conducted thoroughly and consistently, and it's a good idea to remind teams of the key points.

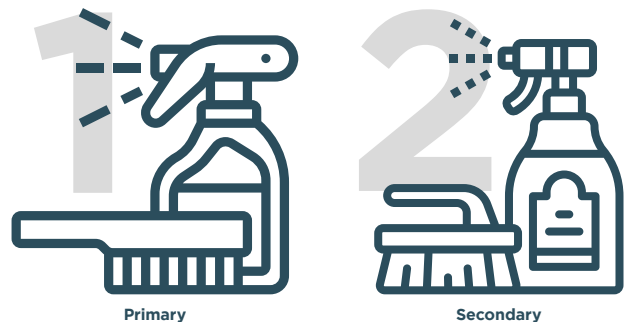


Prior to disinfection

Cleaning properly at the outset and removing all organic matter is even more important than the subsequent disinfection stages. Spraying disinfectant on top of organic matter is ineffective. Disinfecting onto a wet surface will reduce the effectiveness of the disinfectant as you will essentially be diluting the product further, therefore, **always disinfect a dry surface.**

Use different actives at primary and secondary cleaning stages

A robust turnaround routine should incorporate the **use of a variety of actives to combat different micro-organisms at primary and secondary stages**, rather than using the same product twice over – this will provide a broader spectrum of protection. Understanding the actives in different disinfectants is a tricky area. We've designed our website so that a search for disinfectants can be filtered according to area of use, active ingredient and type of application (e.g. gel or foam).



Ensure adequate contact time

Ensuring enough contact time in line with the manufacturer's guidance is important – air vents should remain closed and fans should be switched off until the disinfectant has had sufficient contact time. Foaming disinfectants can increase contact time because they tend to have an extended cling time on vertical surfaces.



Apply actives thoroughly

Follow the manufacturer's instructions and ensure that the correct dilution rate is used. It's important not to rush this stage and to ensure thorough coverage. Foams can be useful as they are also more visible when being applied so it's easier to identify any areas that have been missed.

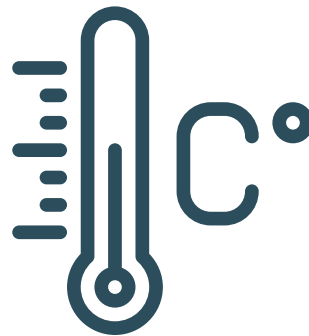


The right product in the right place

The choice of disinfectant needs to be appropriate for the area or application in question. Water lines, for example, require an oxidising disinfectant such as Huwa-San which will combat biofilm.

Temperature

Some disinfectants work better at warmer temperatures while others work whatever the ambient conditions. Oxidising disinfectants such as hydrogen peroxide, peracetics, or peroxygens will work in all temperature ranges, whereas glutaraldehyde and formaldehyde disinfectants will take longer to take effect in colder temperatures.



Sadly, the presence of these viruses is a fact of life for poultry farmers, but like many things in the shed, boosting immunity through good nutrition and maintaining a strict turnaround regime can help keep them at bay. Interhatch is happy to advise on using any of the products mentioned above. We can also help create a bespoke turnaround cleaning and disinfection programme to deal with any specific challenges you may face and ensure that you are getting the most out of your cleaning programme.

Please contact us at sales@interhatch.com for more advice or an informal chat