Vaccination Guidelines for Rabbit Haemorrhagic Disease

Pathogen: Rabbit Haemorrhagic Disease virus (RHDV1 and RHDV2)

Rabbit haemorrhagic disease (RHD) is a highly contagious, acute and fatal disease of rabbits. Morbidity and mortality rates are high in unvaccinated rabbits; and most unvaccinated rabbits will succumb to the disease. Transmission is through direct contact with infected fluids, fur, carcasses, etc. Transmission via fomites (e.g. shoes, clothing, equipment, food), flies and other insects have also been recorded[1]. Unvaccinated rabbits of all ages are susceptible. The virus can be inactivated with 4–10% sodium hydroxide or 1–2% formalin[1]. Other disinfectants that have been suggested include 0.5% sodium hypochlorite (10% household bleach), with a minimum contact time of 5 minutes[2].

Singapore had its first outbreak of RHDV in 2020. The strain involved in the 2020 outbreak is RHDV2. RHD has been reported in some countries around the world (e.g. Europe, Australia, New Zealand, Africa, parts of Asia) in both domestic and wild rabbit populations.

The current vaccine in Singapore provides protection against both RHDV1 and RHDV2.

Risk Factors:

The risk of RHD is low for rabbits that are housed indoors with minimal exposure outdoors and to rabbits from other households. Interaction with rabbits of unknown vaccination and health status pose a risk of infection. Rabbits, personnel and items entering Singapore from overseas countries that have RHD may carry the virus. Proper hygiene (to disinfect clothing and items) and self-quarantine measures (for rabbits coming back from overseas) can be adopted to reduce the risk of disease spread.

Recommendation:

The initial vaccination can be given from **10 weeks of age** or older. Subsequent boosters should be given **annually** if the risk continues to be present.

[1] The Center for Food Security and Public Health 2020, *Rabbit Hemorrhagic Disease and Other Lagoviruses*, viewed 29 September 2020, http://www.cfsph.iastate.edu/Factsheets/pdfs/rabbit_hemorrhagic_disease.pdf
[2] United States Department of Agriculture, *General Guidance for Cleaning and Disinfection of Rabbit Hemorrhagic Disease Virus (RHDV) Contaminated Premises*, viewed 29 September 2020, https://www.aphis.usda.gov/animal_health/downloads/rhdv-cleaning-guidance.pdf

Frequently Asked Questions

1. **Do I need to vaccinate a pet rabbit that stays indoors all the time?**

While the risk of RHD is low for rabbits that are housed indoors with minimal exposure outdoors and to rabbits from other households, it is still advisable to consider vaccination after an assessment of the patient and the risks of exposure to the pathogen. RHD is transmitted via direct contact with infectious material (e.g. body fluids and fur) from an infected rabbit and can also be indirectly transmitted via fomites (e.g. shoes, clothing, equipment, food), flies and other insects.

2. **Does the vaccine protect against all serotypes of RHDV?**

The RHDV vaccine currently available in Singapore is a bivalent vaccine that effectively protects against both RHDV1 and RHDV2.

3. **Does the vaccine guarantee that rabbits will not be affected by RHDV?**

The vaccine is effective in preventing disease and reducing infection in vaccinated rabbits. Good hygiene, biosecurity, husbandry (diet and environment), and other preventative healthcare measures, are still essential to provide rabbits with the best level of protection against RHD.