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039 – Avian influenza - VII

Management strategies

Management strategies centre around biosecurity, diagnosis and surveillance, elimination of infected birds, decreasing flock susceptibility and education. In the case of HPAI then obviously the overall objective must be elimination and reattainment of disease freedom but with LPAI it may well be that we have to live with the disease so our strategies are then aimed at reducing the economic impact of the disease.

Eradication

Typically HPAI should be eliminated in six months but this has not always been the case with HPAI H5N1. Such programs include strict control on bird movements, screening all flocks and quickly disposing of infected flocks and, often, also disposing of high risk contact flocks. Lack of adequate compensation from government can adversely affect an eradication programme as some farmers may not be adequately motivated to report suspicions of the disease.

Biosecurity

This is the first line of defence and inclusive biosecurity in which the objective is to stop disease from spreading from infected premises is very important. Special measures are required when depopulating an infected farm.

Treatment

No effective treatment for avian influenza exists.

Vaccination

Vaccination has mainly been used in chickens and turkeys to counter LPAI. Traditionally inactivated vaccines were used but more recently newer technologies such as genetic engineering of viruses (for example, fowl pox recombinant vaccines) have been utilised.

It is not feasible to vaccinate against all possible subtypes so traditionally the causal virus has been identified and an appropriate vaccine manufactured or in the case of H5 and H7 vaccines in some countries drawn from emergency vaccine stocks. In ovo vaccination is possible. However, it should be remembered that the use of a vaccine greatly limits the role and value of blood testing in an eradication programme, especially in the case of LPAI. This might not be the case with recombinant vaccines.

In this last case, or when a heterologous vaccine is used, blood testing can be used as the backbone of a DIVA strategy