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Avian influenza XXX

Routes of vaccine administration

The route of administration of the vaccine often has a major effect on the development of a protective immune response and this can be influenced by the type of vaccine, host species, management system and bird age.

- By injection, post hatching

This involves catching, handling and injecting (=stressing) all birds that are to be vaccinated. Most licensed avian influenza vaccines are injected subcutaneously or intramuscularly. Alternatively, the in ovo route can be used for some vaccines

- Mass administration

Low cost methods of mass administration would be useful in terms of labour and cost. Mass administration methods include in ovo and post hatch administration by spray to the respiratory tract or by water or feed to the digestive tract.

- In ovo vaccination

Presently, this is more at a conceptualisation and evaluation stage.

- Respiratory administration by spray or eyedrop

For other diseases spray vaccination is often done in a spray cabinet in the hatchery. The concept of producing infectious clone systems for the production of avian influenza vaccines has evolved. rNDV vectors with H5 or H7 avian influenza virus gene inserts have been used to vaccinate chickens and protection has been demonstrated for challenge by Newcastle disease and HPAI. At least two rNDV-H5 vaccines have been registered in China and Mexico, however, in the field maternal antibody against Newcastle disease or the H antigen of the influenza gene insert has inhibited the primary immune response and protection.

- Administration via drinking water or feed

Currently there are no licensed products for administration via the drinking water or feed.