

**DANISCO**  
First you add knowledge...



Alltech

Biomim

IZO

Lallemand

LUBING

Norel

Orka Food Technology

Plumatech

Special Nutrients

Vencomatic

## Control strategies

Management factors and concurrent infections (respiratory viruses, mycoplasma and bacteria) significantly affect the severity of avian metapneumovirus in poultry. Management factors that influence the course of avian metapneumovirus infections include overstocking, under ventilating and poor/wet litter. Debeaking or vaccination can also be regarded as stresses in this context.

Good biosecurity is essential if one is going to have a reasonable chance of keeping this disease out of a poultry farm.

When secondary bacterial infections are involved the use of an appropriate antibiotic is often worthwhile.

## Vaccination

Live and inactivated avian metapneumovirus vaccines are available for use in chickens and turkeys. Early live vaccines and their administration were associated with problems because of their poor attenuation – in fact their use in turkeys was often associated with outbreaks of rhinotracheitis complicated by secondary E. coli infections.

Live vaccines are usually administered by spray or via the drinking water and stimulate both humoral and local immunity. When the systemic humoral immunity is poor following vaccination the local immunity is usually strong enough to provide protection.

High levels of maternal immunity are sometimes not enough to give protection against a virulent avian metapneumovirus infection.

Good cross protection occurs following vaccination with subtype A or subtype B vaccine and vaccines of both subtypes provide protection against subtype C field infections.

To provide complete protection in adult birds, oil adjuvanted avian metapneumoviruses should be used after priming with a live vaccine.

In turkeys in areas where there is heavy field pressure of infection two or three applications of a live vaccine may be required to provide a continuous and adequate cell mediated or local immunity in the respiratory tract. As has previously been alluded to, secondary pathogens can complicate reactions in birds to the live vaccines. There is also evidence to suggest that live infectious bronchitis vaccines interfere with the replication of live avian metapneumovirus vaccines but this does not seem to seriously impair vaccinal immunity.

Because of reversion of some live vaccines in the field, in the future there could be a move into the use of recombinant vaccines in commercial poultry.