

## **Infectious Laryngotracheitis of Chickens: Presentation and Control**

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Infectious Laryngotracheitis (LT) is a contagious respiratory disease of chickens that is caused by a herpes virus. Chickens infected with LT virus may have severe symptoms including coughing of bloody mucus, gasping and high mortality due to mucus blockage of the respiratory tract. Less severe cases are characterized by mild respiratory distress, sinusitis, poor weight gain and lower mortality. Both mild and severe forms are economically costly to the poultry industry. Production losses are related to mortality of adult birds, pullets and broilers, and decreased weight gain and/or egg production by infected birds. Once non-immune birds are exposed to the virus, they show signs of disease in 6-12 days. These signs begin as nasal discharge, coughing or gasping, and may proceed to include the high mortality of a severe break. Those that recover generally do so in 10-14 days.

LT has been reported in chickens since 1925, and sporadically appears throughout the world in areas with high concentrations of commercial poultry. It may become endemic in a geographic area, especially where there are multiple ages of birds that might harbor the virus. It has been a recurring disease problem in broiler flocks in North Carolina for at least the past three years, striking mainly in early spring and summer. NC counties affected by LT this year have included Anson, Chatham, Cleveland, Montgomery, Moore, Richmond, Robeson and Rockingham. The outbreaks have been successfully controlled using enhanced biosecurity, and selective vaccination of broiler flocks in combination with routine vaccination of broiler-breeder flocks. The most recent outbreaks began in May, 2006 and were resolved by mid-August after marketing affected birds.

As with other diseases caused by herpes viruses, LT has the capability to remain hidden in the infected bird after its recovery from the clinical disease, then reappear when conditions are favorable. This "latent" ability of the virus makes it difficult to completely clear a geographical area of disease, especially when older birds can come into contact with younger birds which have not been exposed to the LT virus. In addition, vaccination with modified-live virus vaccines, the most common type used, will result in immunity but also produce some birds which can act as carriers of the virus. These birds may shed virus capable of causing disease in unprotected chickens, especially when they are stressed by changes in management such as re-housing, or the onset of egg production. Incomplete coverage of a broiler house with vaccine administered through water or spray will result in non-vaccinated birds becoming ill with LT. In this way improper vaccination in an attempt to control or prevent an LT outbreak may actually perpetuate the disease.

Preventing and controlling LT outbreaks requires careful attention to biosecurity and proper vaccination technique in broiler-breeders and broilers. Traffic of humans, equipment and machinery in and out of chicken houses should be strictly controlled to prevent spread of LT. Proper vaccination of individual broiler-breeders by eye drop vaccine is one way to achieve immunity in older birds and avoid an outbreak which would adversely affect egg production. Vaccination is recommended for broilers only in the face of an outbreak, as a containment measure. Ideally, good biosecurity practices and separation of different age birds will prevent exposure to the virus and thus make costly vaccination of broilers unnecessary.