The Threat of Newcastle Disease on the Poultry Industry

Introduction
Newcastle disease (ND) can lead to death in poultry, and is one of the greatest causes of economic loss in poultry production world-wide. Today, Newcastle disease is a topic of rising concern because it poses the constant threat of introduction into disease-free areas. Scientists are working to develop new vaccination programs to control disease spread, but a cure for the disease is yet to be discovered.

What are the Symptoms of Newcastle Disease?
The most common form of ND is the “Doyle’s Form,” which is lethal and causes hemorrhagic lesions in the digestive tract. ND also causes conjunctivitis and lymphoid, vascular, respiratory, neural, and reproductive lesions. Clinical signs include:
- Depression
- Anorexia
- Lethargy
- Respiratory distress
- Coughing
- Gasping
- Greenish watery diarrhea
- Fever

Why is Newcastle Disease a growing concern?
Because infected birds can spread the virus, poultry farm owners should be aware of the economic damages Newcastle disease can impose.

How can I prevent Newcastle Disease from entering my flock?
Although there is no cure for ND, it is a heat labile virus, meaning that it can be inactivated at a certain temperature. Recent experiments have proven that pasteurization may be an effective way of inactivating ND once it is present in eggs (Swayne and Beck, 2004).

The style of housing may also account for much of the disease’s presence, due to sanitation (Kinde & Utterback, 2004). ND tends to be more prevalent in lower-quality manure-handling systems, such as those with only concrete floors or manure pits. Therefore, using a high quality manure-handling system, such as a manure belt disposal system, may prevent disease spread if a flock becomes infected with ND.

Vaccinating large flocks with Hitchner B1(HB1) and La Sota strains may also help prevent the virus from spreading (Nasser et al., 2000). In one of the biggest poultry farms in Ethiopia, where the country depends greatly on poultry production for exportation, at least nine outbreaks have been reported since 1984 because villiage chickens were not vaccinated with these strains.

DID YOU KNOW?
The poultry industry employs more than 11,000 Texans and generates annual cash receipts of more than $1.4 billion. ND can potentially devastate this industry.
Poultry producers in Texas should be especially concerned since ND was found in El Paso in early April. This made it difficult for Texas' commercial chicken, egg and turkey producers to export to other markets.

So far at least 12 countries, including Mexico, have either banned imports of poultry, eggs or poultry meat, or have placed stringent requirements on products.

References

