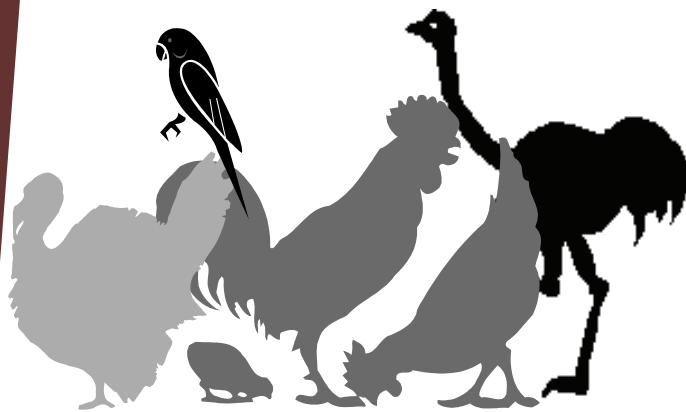




South Dakota  
Animal Industry Board



Exotic Newcastle  
Disease  
**(END)**

All species of birds are at risk  
of getting this disease

### **What is Newcastle Disease?**

Exotic Newcastle Disease (END) is a contagious and fatal viral disease affecting all species of birds, both domestic and wild. END is one of the most infectious diseases of poultry in the world. It is probably the most serious disease of chickens throughout the world. In susceptible chickens, death rates may exceed 95%.

### **What causes Newcastle Disease?**

Newcastle Disease is caused by a Paramyxovirus. It is very resistant and survives a pH of 2 to 12, heating to 130° F (56° C) for 3 hours, and can survive freezing indefinitely. Extended drying and ultraviolet light will kill the virus. END virus can survive for several weeks in the warmth and humid environment of a poultry production unit on feathers, in manure, and other materials.

### **What are the signs and symptoms of Newcastle Disease?**

END affects the respiratory, nervous and digestive systems. The incubation period ranges from 2 to 15 days. Affected birds may exhibit the following signs:

- Respiratory: sneezing, gasping for air, nasal discharge, coughing;
- Digestive: greenish, watery diarrhea;
- Nervous: depression, muscular tremors, drooping wings, twisting of head and neck, circling, complete paralysis;
- Partial to complete drop in egg production;
- Production of thin shelled eggs;
- Swelling of the tissues around the eyes and in the neck;
- Sudden death;
- Increased death loss in flock.

### **How does Exotic Newcastle Disease spread from farm-to-farm, bird-to-bird?**

Healthy birds are infected when there is direct contact with infected bodily discharges of infected birds such as droppings and secretions from the nose, mouth, and eyes. Close confinement causes a rapid spread of disease among birds. All bodily discharges contain high concentration of END virus. Therefore, the virus-bearing material can be picked up on insects, rodents, containers, shoes and clothing and carried from a sick flock to a healthy flock. Any person on the infected farm can spread END virus including manure haulers, rendering truck drivers, vaccination and debeaking crews, egg service people, load-out crews, chick and poultry delivery personnel, and poultry farm owners, employees, and visitors.

### **Are pet birds at risk of END?**

Smuggling pet birds, especially Amazon parrots pose a great risk of introducing END. Amazon parrots that are carriers of END but do not show symptoms are capable of shedding END virus for more than 400 days. All species of birds are capable of becoming infected and transmitting this disease.

### **Are humans at risk of getting END?**

END does not pose a threat to humans. Eggs and inspected slaughter poultry are safe for food. Conjunctivitis has occurred in diagnosticians and pathologists after examining infected birds.

**Are waterfowl and migratory birds at risk of spreading Newcastle disease?**

Yes, cormorants and pelicans were identified with Newcastle disease in 1992 in Minnesota, South Dakota, Michigan and Canada. One South Dakota poultry site and two North Dakota poultry sites were affected. This episode of Newcastle Disease was not the same strain of END that occurred in California in 1998 and now in 2003, or that occurred in Mexico in 2000.

**What can poultry producers do to lessen the risk of introducing this disease to their birds?**

1. Permit only essential workers and vehicles on premises. Ensure no shipping articles, equipment, or personnel have contact with quarantined areas.
2. Provide clean clothing and disinfection facilities for employees.
3. Clean and disinfect vehicles (including tires and undercarriages) entering and leaving the premises.
4. Avoid visiting other poultry operations.
5. Maintain an “all-in and all-out” philosophy of flock management with a single age flock.
  - Control the movement of all poultry products from farm to farm.
  - Do not “skim” mature birds from a flock for sale to a live-poultry market.
  - Clean and disinfect poultry houses between each lot of birds.
6. Do not keep pet birds on the farm. Do not hire employees who own pet birds.
7. Exclude vaccination crews, catching crews, and other service personnel who may have been in contact with a poultry operation within 24 hours.
8. Protect flocks from wild birds that may try to nest in poultry houses or feed with domesticated birds.
9. Control movement associated with the disposal and handling of bird carcasses, litter, and manure.
10. Immediately report any suspicious illness or death loss to the state veterinarian.
11. Take diseased birds to a diagnostic laboratory for examination as directed by the state veterinarian.
12. Consider END surveillance as part of on-going disease surveillance activities.

**What can pet birds and backyard poultry enthusiasts do to prevent and control END?**

1. Follow state law, obtain a health certificate on birds directly imported to South Dakota from other states.
2. Require certification from suppliers that birds are legally imported or are of US stock and healthy prior to shipment, and will be transported in new or thoroughly disinfected containers.
3. Maintain records and shipment of flocks.
4. Isolate all newly purchased birds for at least 30 days. Restrict movement of personnel between new and old birds.
5. Practice Biosecurity.
6. Report unusual illness or death to the state veterinarian.

**Are your exotic pet birds legally imported?**

END is a threat to the caged-bird industry and poultry hobbyists. Birds illegally smuggled into the US are not quarantined and tested on entry. Anyone who is offering to sell young parrots should be suspected of smuggling or purchasing smuggled birds. Amazon parrots can be carriers of END and can shed the virus for more than 400 days.

**What is being done to prevent END from being introduced into US birds?**

USDA-APHIS requires that all imported birds (poultry, pet birds, birds exhibited to zoos, and ratites) be tested and quarantined for disease before entering the country.

**Why the excitement about Exotic Newcastle Disease?**

END is classified as a Foreign Animal Disease when found in the US. A foreign animal disease is defined as an important transmissible livestock and poultry disease believed to be absent from the US and its territories that has a potential significant health or economic impact. Not only is there the high death rates, severe illness, and production losses; there is almost immediate and severe loss of export markets.

**What is the export value of poultry products from the US?**

Total US exports of poultry meat in 2001 were valued at \$2.1 billion. US exports of eggs were valued at \$151 million in 2001.

**Are ring neck pheasants susceptible to END?**

Yes, death losses may be quite significant, and re-building the population may take many years.

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Revised January 2010