

University of California Recommendations to Prevent the Spread of Exotic Newcastle Disease

1. **Sources of virus.** Exotic Newcastle disease virus (NDV) can infect a wide variety of bird species. Parrots and other psittacine birds are especially dangerous because they can carry exotic Newcastle disease virus and show no signs of disease. Most infected chickens and turkeys will die from this disease but can also spread the virus. NDV is hardy and can easily survive on feet, hands, and clothes.

2. **Transmission.** The virus is excreted in feces and from the respiratory tract as an aerosol. The virus can easily contaminate feed, water, footwear, clothing, tools, equipment, and the environment.

A. Isolation refers to the confinement of animals within a fence, which keeps your birds in, but it also keeps other animals out.

- 1) Prevent the introduction of new birds to a previously infected facility for 2-3 weeks after a complete cleanout.
- 2) Clean out vegetation around poultry houses and pens to remove shelter and food for possible carriers of the virus.
- 3) Institute a control program for insect, mammalian, and avian vectors, which are important because they carry infections to new birds.
 - a) If possible, keep birds in closed houses or coops rather than exposed to wild birds.
 - b) Institute insect and rodent control programs.
- 4) Prevent the accumulation of standing water. This is a great attraction to migrating birds, which can carry NDV.
- 5) Limit sources of food for wild and free-flying birds. Cover all feed storage. Clean up spills when they happen.
- 6) Do not visit live bird markets, pet stores that may have exotic birds, or other places where there are birds that could carry NDV.
- 7) Avoid dead wild, domestic or free-flying birds you find or are brought to you. Any found on your premises must be treated as though they are highly infectious. Handle them with gloves, place in a plastic bag, and seal it, finally, shower and change clothes before entering poultry facilities again.

B. Traffic control includes both the traffic onto your farm and the traffic patterns within the farm.

- 1) Be a good neighbor. If you have or suspect Newcastle disease, initiate a self-imposed quarantine.
 - a) Most critically, stop all movements of people
 - b) Get birds (some sick and some dead) to the diagnostic laboratory (phone numbers follow)
 - c) Get advice (contacts follow)
- 2) Keep human farm-to-farm traffic to a minimum. Conduct business by phone when possible.
- 3) Find out where someone has been before inviting them visit your flock. Shoes and clothes can carry NDV so, it is best to provide plastic boots and coveralls to all visitors.
- 4) Isolate dead bird disposal away from your flock. Never walk from this area back to your flock. Protect carcasses from predators and take them to the diagnostic laboratory as soon as it is reasonable (Laboratory phone numbers follow).

C. Sanitation means the disinfection of people, and equipment entering the farm and the cleanliness of the personnel on the farm.

Cleaning and disinfection

- 1) Newcastle disease virus can survive at room temperature for days to months. However, NDV is sensitive to most disinfectants and can be readily inactivated if a surface is properly cleaned first. A list of disinfectants effective in killing NDV follow.
- 2) Feathers and feces, must be removed before disinfection by any method can be effective. Cleaning protocols should include a fair amount of elbow grease and critical inspection.

Prevent the spread of NDV on equipment

- 1) Make sure that any vehicles coming near your flocks are not contaminated with litter or feces. Wash and disinfect the tires and wheel wells of all vehicles coming onto your premises.
- 2) Wash with detergent and disinfect all bird hauling and manure handling tools, equipment, and vehicles.
- 3) Enclose all dead birds to be taken to the laboratory in plastic bags. Confine live birds being submitted to the laboratory in boxes that will not return to your farm. Disinfect any vehicles returning from the laboratory including the floor mats. Do not let anyone who has been to the laboratory return to your flock without a shower and a change of clothes.

The details of cleaning and disinfecting any facility will depend on a number of factors that differ between farms. In all situations, it is highly recommended that a professional advisor be consulted to help develop and implement your plans.

General comments

- 1) Spraying a facility with a disinfectant after complete depopulation to remove NDV from an infected facility. At the same time a vector control program should be instituted, followed by removal of manure, cleaning of all surfaces followed by a second application of viricidal spray. All manure should be removed and all surfaces thoroughly dry cleaned prior to applying disinfectants. Next, apply the disinfectant to all surfaces twice, allowing the disinfectant to dry between applications. The house should be left empty for 2-3 weeks before repopulation.

The Newcastle disease virus is sensitive to many disinfectants. However, it is very difficult to inactivate the virus if it is in organic material, such as feces. Therefore, it is very important to use a combination of both cleaning and disinfection to get rid of this virus.

Disinfectants that will kill Newcastle disease virus

1. Phenols such as One-Stroke Environ¹
2. Formaldehyde
3. Hypochlorites such as bleach

¹ This is not a complete listing of effective or approved disinfectants and should not be considered a recommendation.

Diagnostic Laboratories in California

California Animal Health and Food Safety Laboratory (call for locations)-(530) 752-8700

San Diego County Laboratory--(858) 694-2838

Contacts

Cooperative Extension

Dr. Francine Bradley, (530) 752-6316

Dr. Ralph Ernst, (530) 752-3513, raernst@ucdavis.edu

Dr. Carol Cardona, (530) 754-5041, cjcardona@ucdavis.edu

Doug Kuney, (909) 787-2099, drkuney@ucdavis.edu

California Department of Food and Agriculture

Ontario District office (909) 947-4462

Modesto District office (209) 491-9350