



agriculture,
forestry & fisheries

Department:
Agriculture, Forestry and Fisheries
REPUBLIC OF SOUTH AFRICA

**MOVEMENT CONTROL PROTOCOL IN CASE OF AN OUTBREAK OF NEWCASTLE DISEASE –
Edition: 04**

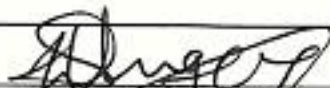
According to Section 31 of the Animal Diseases Act, 1984 (Act 35 of 1984), further referred to as the Animal Diseases Act, the Minister of Agriculture prescribed the following control measures for the control of Newcastle Disease (NCD). This protocol does not substitute but is to be read in conjunction with the above-mentioned government notice.

Table 2 of the Regulations of the Animal Diseases Act prescribes the following:

Animal disease	Nature, causal organism and symptoms	Susceptible animals	Controlled veterinary act to be performed in respect of-		
			Susceptible animals	Contact animals	Infected animals
1	2	3	4	5	6
Newcastle disease	Highly contagious viral disease characterised by respiratory distress, greenish diarrhoea, occasionally nervous symptoms and high mortality	Poultry and birds	All fowls, domesticated ostriches and racing pigeons in the republic shall be immunised and kept immunised by the responsible person with an efficient remedy according to the manufacturer's instructions for the use thereof	Contact animals shall be isolated and immunised by the responsible person with an efficient remedy	Infected animals, dead or alive shall be isolated. *

* Under review

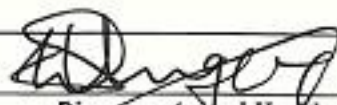
Until further notice, the following control measures for NCD are applicable and approved by the Director: Animal Health (DAH) of the Department of Agriculture, Forestry & Fisheries (DAFF):


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1. BACKGROUND

- 1.1 For the purpose of NCD control and this protocol, **Newcastle disease** is defined as a "Highly contagious viral disease caused by avian paramyxovirus type 1 (velogenic or mesogenic) strains that cause or have the potential to cause severe disease characterised by respiratory distress, greenish diarrhoea, occasionally nervous symptoms and high mortality"
- 1.2 '**Susceptible species**' according to Table 2 of the Regulations of the Animal Diseases Act are 'poultry' and 'birds'
- 1.3 '**Poultry**' according to the Regulations of the Animal Diseases Act, Definitions (1) includes 'pigeons, ducks, geese, fowl, turkeys, cage birds, muscovies, domesticated ostriches, tamed wild birds and wild birds kept in captivity'.
- 1.4 '**Infected**' means poultry in an epidemiological unit which are either showing clinical signs that are typical of Newcastle disease and/or from which a virulent strain of Newcastle disease virus has been isolated or identified by reverse transcriptase polymerase chain reaction (RT-PCR),
- 1.5 '**Suspect**' means poultry within a biosecurity unit where there are birds that are showing signs that are typical of Newcastle disease. All cases where the following symptoms are observed without an alternative explanation should be regarded as 'Suspect':
- (1) Mortalities exceeding 1% per day for 3 consecutive days in birds more than 10 days of age
 - (2) Egg production drops exceeding 5% per day for 3 consecutive days with or without egg shell colour changes and deterioration in internal eggs quality.
 - (3) Feed and water intake reductions exceeding 25% for 3 consecutive days
- 1.6 '**Free**' poultry refers to poultry within an epidemiological biosecurity unit that are neither **infected** nor **suspect**
- 1.7 This **protocol does not invalidate any other disease control measures** prescribed in accordance with the Animal Diseases Act, the Regulations made thereunder.
- 1.8 Any **exemptions** from the requirements of this protocol (including exemptions in terms of Regulation 11 of the Animal Diseases Regulations) may be granted **only with written approval of the DAH (DAFF)**. Applications for the granting of any exemptions from the requirements or any amendment of this protocol should be made in writing to the DAH (DAFF).



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2. GENERAL

2.1 Immunisation:

According to Regulation No.R. 361 of 7 April 2000, the directive under 'Susceptible animals' was changed to the following:

"All fowls, domesticated ostriches and racing pigeons in the republic shall be immunised and kept immunised by the responsible person with an efficient remedy according to the manufacturer's instructions for the use thereof".

In terms of the above, the 'responsible person' has to ensure that vaccination has been carried out to ensure 'immunisation'. Vaccines have to be transported and stored to ensure that the 'cold chain' is maintained. The reconstitution (in the case of a live vaccine) and the administration of the vaccine have to be done with extreme care to ensure that immunisation (manufacture of antibodies by the body) takes place.

The 'responsible person' should also carry out the applicable tests (serology) to monitor whether 'immunization' has taken place, in accordance with the specific vaccination programme and test method used. Tests have to be carried out by an approved laboratory.

2.2 Reporting:

According to Section 12 of the Regulations of the Animal Diseases Act,
All outbreaks or suspected outbreaks of Newcastle disease have to be reported to the nearest state veterinarian or animal health technician (in terms of the Animal Diseases Act).

Section 12 (4) further states that *'The provisions of subregulations (1) and (2) shall mutatis mutandis apply to the person in charge of any laboratory or other institution at which a controlled animal or thing is examined for diagnostic purposes.*

This implies that any laboratory that isolates or identifies a virulent Newcastle Disease virus, has to report its finding to the responsible state veterinarian or animal health technician.

3. CONTROL MEASURES IN CASE OF AN OUTBREAK OF NEWCASTLE DISEASE

3.1 Quarantine:

- (i) In terms of Table 2, Section 11, the state veterinarian will place the epidemiological unit under official quarantine on suspicion of an outbreak of Newcastle disease. It is counter productive to wait until confirmation and pathogenicity studies have been completed, as this will allow the virus to spread.
- (ii) Notice of quarantine must be issued by the State Veterinarian to the owner of the poultry establishment.
- (iii) Quarantine may also be extended to adjacent farms following epidemiological investigations.



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- (iv) A register of all domesticated birds on the holding must be drawn up and records kept of production parameters and mortalities.
- (v) All susceptible poultry must be isolated and strict measures introduced to prevent the spread of the virus. This must include control of movement of people, equipment, vehicles, feed and other chicken materials (eggs, manure etc) off the farm.
Nothing is allowed to be moved off the farm without the permission of the State Veterinarian. Such movement will be by way of a Red Cross Permit under veterinary supervision.
- (vi) Lifting of quarantine:
 - (a) Quarantine may only be lifted when:
 - i. Infection has not been confirmed within a reasonable period of time (21 days)

OR

- ii All infected birds have been removed from the epidemiological unit, either because of death or because they have all been slaughtered

AND

The entire epidemiological unit has been properly cleaned and disinfected with a disinfectant registered against Newcastle disease virus. Cleaning has to include the removal of all litter/bedding material, equipment (feeders, waterers etc for cleaning and disinfection outside the house) and disinfection has to be done after the houses have been cleaned.

AND


A bird-free holding period of at least 7 days has been observed after cleaning and disinfection.

OR

- iii. Quarantine on a multi-age unit

Quarantine may be lifted 42 days after all poultry in the epidemiological unit no longer show signs of the disease as described in Section 1.5.

AND



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Poultry on the biosecurity unit have been vaccinated at least twice at a minimum interval of two weeks within the preceding 30 days with a registered Newcastle disease vaccine (registered in terms of Act 36/1947).

3.2 Other measures:

3.2.1 Vaccination

All poultry on the farm must immediately be vaccinated by the responsible person with a registered approved Newcastle disease vaccine (registered in terms of Act 36/1947). The relevant state veterinarian must arrange for poultry within a 3 km radius to be vaccinated immediately with a registered approved Newcastle disease vaccine (registered in terms of Act 36/1947).

It must be ascertained whether immunization has taken place, in accordance with the specific vaccination programme and test method used.

Tests to be carried out by an approved laboratory.

3.2.2 Handling of culls and mortalities:

Diseased culls and mortalities must be destroyed on the farm by burial (if allowed) composting or incineration or moved after death in closed leak-proof containers under a red cross permit to an approved rendering plant. In all cases minimal risk in contaminating the environment has to be ensured.

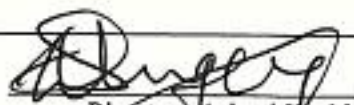
3.2.3 Handling of manure:

- (i) Where possible, manure should be handled on site. Manure from quarantined biosecurity units should be moved with due regard for other poultry units and should preferably not be put within a 3km radius of other poultry units. It may only be moved under cover of a Red Cross Permit issued by the State Veterinarian of the area and only for the purpose of heat treatment for a minimum period of 28 days.
- (ii) Heat treatment can be accomplished by composting (ideal method) or by piling it up and covering it (if possible).
- (iii) If there is too much manure to allow it to be covered, it must be watered to form a crust on the outside.
- (iv) Manure/litter that has been either composted or piled up and covered or watered to form a crust, is normally considered safe after a period of 28 days has lapsed since the start of composting.

3.2.4 Handling of live birds:

(a) Broilers:

- (i) No trade of any live broilers on/from the quarantined epidemiological unit will be allowed.



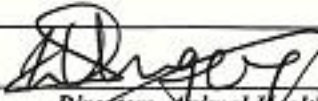
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- (ii) Moribund birds must be destroyed for welfare reasons. All other remaining birds at a slaughter age shall be sent for slaughter immediately.
No slaughter of sick birds allowed.
- (iii) Birds that are too young to be slaughtered, may be left in the house until they are old enough to be slaughtered (not slaughtered or removed live until they are old enough to be slaughtered). They must then be moved under cover of a Red Cross Permit to an approved abattoir. This means that the farm will remain under quarantine until the requirements as specified under 3.1 (vi) have been met.
- (iv) Birds for slaughter:
 - Slaughtered at an approved abattoir along a route with due regard for other poultry units
 - Transported under cover of a Red Cross permit issued by the State Veterinarian of the area.
 - Trucks for the transport of the chickens cannot be closed completely, due to the presence of live birds, but all efforts have to be made to decrease the drop-off of manure and feathers, to prevent the spread of virus.
 - A procedure has to be put into place to ensure that the load is not tampered with *en route* to the abattoir.
 - If it is possible to seal the truck, this would be the option of choice
 - If it is not possible to seal the truck, the animal health technician will have to accompany the truck to the abattoir.
 - Broilers are to be starved for 9-12 hours prior to transport and slaughter, to decrease the presence of faeces in the intestinal tract and thus decrease the spread of the virus. Starvation for longer will result in more watery faeces, which will lead to increased contamination of the road and thus the increased spread of the virus.
 - Birds should be slaughtered at the end of a shift (separated by time and/or space). Sanitation of the abattoir is recommended immediately after the slaughter of infected birds.
 - Vehicles and equipment used to transport infected birds must be appropriately sanitised prior to departure from the abattoir.

(b) Layers/Breeders:

- (i) No trade of any live birds on/from the infected epidemiological unit will be allowed until quarantine has been lifted except for birds for direct slaughter at an


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- approved abattoir under cover of a Red Cross Permit issued by the State Veterinarian of the area.
- (ii) Slaughter in the case of adult layers or breeders is problematic, as abattoirs are generally not equipped to handle larger birds.
If a suitable abattoir is available, (a) (i)-(v) will apply.
 - (ii) Handling of table eggs: See 3.2.5
 - (iii) Measures should be taken to contain the virus on the farm and prevent the spread of the virus from the farm. This can be done by:
 - ensuring that the eggs are handled correctly and disinfected effectively
 - disinfection of all vehicles entering and leaving the farm with a registered disinfectant
 - controlling the entry and exit of all workers
 - not allowing any visitors onto the premises.

(c) Rearing farms

Chickens (pullets and breeders) that have been reared until age of placement, cannot be kept indefinitely on the rearing farm, due to the logistics of placement at layer/breeder farms and cleaning and disinfection of the rearing site prior to the reception of the next batch of day-old chicks. If there is an outbreak of Newcastle disease, quarantine as per 3.1 would apply. The following measures should thus apply if there is no outbreak as such, only a suspicion of an outbreak.

If **suspect** point of lay pullets under quarantine are to be moved:

- (i) The receiving farm is to be notified in advance.
- (ii) The responsible state veterinarian of the area in which the pullets were reared has to inform the responsible state veterinarian of the receiving area of the movement. This is important to ensure that there are no EU approved ostrich abattoirs or farms near the receiving farm, as this could compromise exports.

If a multiple-age laying site is to receive such chickens, all these chickens must be vaccinated with a registered Newcastle disease vaccine (registered in terms of Act 36/1947) 14-30 days before the potentially infective flock is to be received.

It must be ascertained whether immunization has taken place, in accordance with the specific vaccination programme and test method used. Tests are to be carried out by an approved laboratory.

- (iii) Poultry on the epidemiological unit of origin are to be vaccinated at least twice at a minimum interval of two weeks within the preceding 30 days prior to movement with a registered Newcastle disease vaccine (registered in terms of Act 36/1947). Chickens are to be moved under cover of a Red Cross Permit to their destinations without stops and along roads where there is the lowest risk to other poultry owners.



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- (v) The farm which receives the suspect point of lay pullets must be placed under quarantine for 21 days for observation. If signs of infection are detected, the farm will remain under quarantine as per point 3.1 above.

3.2.5 Handling of hatching and table eggs:

Vertical transmission of NCD virus (passing of virus from the infected hen to the progeny via the embryo) is controversial. It is thus counter-productive to prevent table eggs and hatching eggs from leaving the farm. Measures should however, be applied to ensure that the egg surfaces are not contaminated by the virus.

Hatching eggs:

To be disinfected by spraying or fogging with a suitable, registered disinfectant prior to collection by the hatchery/prior to leaving the epidemiological unit.

The fumigation of hatching eggs with formaldehyde gas will also be effective, but care should be taken to protect workers by means of safety glasses, masks and gloves to avoid contact with mucous membranes.

Fumigation of hatching eggs could also lead to reduced hatchability i

Table eggs:

The risk for table eggs that are sold to supermarkets or egg depots cannot be ignored. Spraying or fogging of table eggs in cartons is problematic, but as the removal of eggs from a farm under quarantine is a special dispensation, the producer has to make a special arrangement with the responsible state veterinarian to have the eggs disinfected. A practical solution would be the installation of a UV light on the grader line or as a separate unit.

Eggs from an epidemiological unit under quarantine shall be sold directly for human consumption (and not be moved to third party pack stations). Dirty eggs shall be appropriately sanitised. Shells from eggs broken for pulp shall be destroyed. Packaging material should either be destroyed or appropriately sanitised.

4. **CLEANING, DISINFECTION AND RESTING**

The property must be rendered safe from a disease point of view by proper cleaning and disinfection by using an effective approved disinfectant and by allowing the affected shed or site to lie empty (bird-free) for at least one (1) week after cleaning and disinfection. It is important that proper dry cleaning be done to prevent the contamination of the environment during the washing process.

5. **EXPORT**

Veterinary health certification, as determined by the importing country, should be observed as regards radius of freedom from Newcastle disease.

No birds from epidemiological units under quarantine will be exported, irrespective of the import requirements of the importing country.



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6. ROUTINE CULLING OR MOVEMENT OF LAYERS AND BREEDERS (IN THE ABSENCE OF ANY NEWCASTLE DISEASE OUTBREAK)

In the case of culls or point of lay pullets, it is essential to ensure that there is no Newcastle disease virus circulating by ensuring sufficient antibody titres. This can be done by either monitoring the chickens or immunization at least 14 days prior to culling or movement.

Culled breeder birds are mostly slaughtered for human consumption, but in many instances the birds are moulted and kept for future production. If these birds are sent into the small-scale poultry sector, it is essential to ensure that they are protected against Newcastle disease.

The producer has to keep records of the Newcastle disease vaccination of the flock prior to culling, including the flock identification, number of birds vaccinated, vaccine used (name, batch number, expiry date) and method of administration. These records need to be kept by the producer for inspection by the responsible state veterinarian during any subsequent inspection.

NOTE: STATE VETERINARY MOVEMENT PERMITS

The purpose of state veterinary movement permits is to control movements which pose or potentially pose animal health risks by allowing such movements only on risk-mitigating conditions specified in such a permit as well as to keep records of movements for tracing and reporting purposes. Two types of permits are issued:

- **RED CROSS PERMIT:** *A Red Cross permit is only used where animals or products to be moved are potentially infected (for example if they originate from infected or potentially infected areas) and therefore subject to one or more restrictions en route or at destination. In terms of this protocol, Red Cross Permits are thus issued only for movements of poultry or products out of the NCD infected premises for direct slaughter, disposal or composting. Such products must be moved in a truck with a seal or accompanied by an animal health technician.*
- **ORDINARY MOVEMENT PERMIT:** *An ordinary movement permit is used for all other movements that are subject to state veterinary movement permit control. A seal or other control measure (e.g. accompaniment by an animal health technician) may be required for such movements if these take place through a Controlled Area to ensure that the animals or products are not tampered with during the journey.*



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