

# NEWCASTLE DISEASE VACCINATION PROGRAM

## LAYER BREEDERS

### STANDARD OPERATING PROCEDURES

**(Note: in accordance with the National ND Management Plan 2008-2012, vaccination and testing requirements vary between states).**

#### 1.0 Vaccination program

Age of birds	Type of vaccine
2–4 weeks <sup>a</sup>	Live V4 ( <b>MANDATORY IN ALL STATES</b> )
12–18 weeks	Inactivated ND vaccine ( <b>MANDATORY IN NSW AND VICTORIA</b> but optional in all other states)
12–14 weeks and every 6 to 8 weeks thereafter	Live V4 ( <b>NOT A PERMITTED OPTION IN NSW AND VICTORIA</b> )  (A permitted option in other states)

a In addition, where a veterinary advisor deems it is appropriate, live V4 may also be used at day-old.

#### 2.0 Serological target for vaccination outcome

2.1 Titres are defined as adequate if they are:

(i) In Western Australia and Tasmania only (permitted option for low risk jurisdiction):

A mean titre of  $2^3$  at 16- 18 weeks of age with 66% or more of samples at or above  $2^3$ . Can be achieved using either V4 on its own or using V4 + Inactivated ND vaccine.

(ii) In Queensland and South Australia (medium risk jurisdictions):

The following options are permitted to achieve  $2^3$  or above for the **duration of the life** of the bird;

- *priming with live V4 at 2-4 weeks followed by Inactivated ND vaccine at 12-18 weeks of age*
- *Continuous vaccination using V4 every 6-8 weeks is permitted. This option requires monitoring as per 3.2 and revaccination with V4 or inactivated ND vaccine if titres are **below**  $2^3$ .*

(iii) In NSW and Victoria:

Titres are defined as adequate if from four weeks after the first vaccination with V4 the mean HI titre of the flock is at least:

- (1)  $2^3$  to 18 weeks of age; and
- (2)  $2^5$  thereafter with 66% or more of samples at or above  $2^5$ .

**3.0 Sampling frequency (excluding Western Australia and Tasmania) depends on the vaccination program**

3.1 Live V4 vaccine + Inactivated ND vaccine:

Producers using this program are not required to sample their flocks to demonstrate protection. Records must be kept to demonstrate during any audit that vaccination has taken place.

3.2 Live vaccination every 6-8 weeks:

3.2.1 A mean titre of  $2^3$  or above in at least 66% of the sampled birds must be demonstrated at least 3 times; at 18, 34, and 52 weeks of age (applicable to Queensland and South Australia).

3.2.2 If birds are kept for longer than 75 weeks of age, additional sampling is required at 75 weeks of age

3.3 All serological sampling is to be undertaken under veterinary supervision or a person approved by the CVO of the relevant state or territory in accordance with the approved sampling protocol.

3.4 On each occasion samples from a minimum of 15 birds must be tested to determine mean titres.

# NEWCASTLE DISEASE VACCINATION PROGRAM

## MEAT BREEDERS

### STANDARD OPERATING PROCEDURES

**(Note: in accordance with the National ND Management Plan 2008-2012, vaccination and testing requirements vary between states).**

#### 1.0 Vaccination program

Age of birds	Type of vaccine
2–4 weeks <sup>a</sup>	Live V4 ( <b>MANDATORY IN ALL STATES</b> )
<p><b>Thereafter, two alternatives:</b></p> <p>A. 12–18 weeks</p> <p>B. Thereafter to maintain 2<sup>5</sup> in NSW and Victoria or 2<sup>3</sup> in Queensland and South Australia</p> <p><b>**In Western Australia and Tasmania a titre of 2<sup>3</sup> is required at 16-18 wks of age.</b></p>	<p>A. Inactivated ND vaccine</p> <p>B. Repeat Live V4 every 6-8 weeks</p>

a In addition, where a veterinary advisor deems it is appropriate, live V4 may also be used at day-old.

#### 2.0 Serological target for vaccination outcome

2.1 Titres are defined as adequate if they are:

(i) In Western Australia and Tasmania only (permitted option for low risk jurisdiction):

2<sup>3</sup> at 16- 18 weeks of age with 66% or more of samples at or above 2<sup>3</sup>.

(ii) In Queensland and South Australia (medium risk jurisdictions):

The following options are permitted to achieve 2<sup>3</sup> or above for the **duration of the life** of the bird:

- *inactivated ND vaccine (optional)*
- *Continuous vaccination using V4 every 6-8 weeks is permitted. This option requires monitoring as per 3.2 and revaccination with V4 or inactivated vaccine if mean titres are below 2<sup>3</sup> and at least 66% of the birds sampled do not reach either of these targets.*

(iii) In NSW and Victoria:

Titres are defined as adequate if from four weeks after the first vaccination with V4 the mean HI titre of the flock is at least:

- (1) 2<sup>3</sup> to 18 weeks of age; and
- (2) 2<sup>5</sup> thereafter with 66% or more of samples at or above 2<sup>5</sup>.

### **3.0 Sampling frequency (excluding Western Australia and Tasmania) depends on the vaccination program**

#### 3.1 Live V4 vaccine + Inactivated ND vaccine

Producers using this program are not required to sample their flocks to demonstrate protection. Records must be kept to demonstrate during any audit that vaccination has taken place.

#### 3.2 Live vaccination every 6-8 weeks (all states except Tasmania and Western Australia):

3.2.1 A mean titre of  $2^3$  or above must be demonstrated at least 3 times; at 18, 34, and 52 weeks of age (**applicable to Queensland and South Australia**).

3.2.2 A mean titre of  $2^5$  or above must be demonstrated at least 3 times; at 18, 34, and 52 weeks of age (**applicable to NSW and Victoria**).

#### 3.3 All serological sampling is to be undertaken under veterinary supervision or a person approved by the CVO of the relevant state or territory in accordance with the approved sampling protocol.

#### 3.4 On each occasion samples from a minimum of 15 birds must be tested to determine mean titres.

**NEWCASTLE DISEASE VACCINATION PROGRAM  
LAYING HENS AND PULLETS (VACCINATED IN CAGES)  
STANDARD OPERATING PROCEDURES**

**(Note: in accordance with the National ND Management Plan 2008-2012, vaccination and testing requirements vary between states).**

**1.0 Vaccination program**

Age of birds	Type of vaccine
2–4 weeks <sup>a</sup>	Live V4 ( <b>MANDATORY IN ALL STATES</b> )
6–8 weeks	Live V4 ( <b>MANDATORY IN ALL STATES</b> )
10–14 weeks <sup>b</sup>	Inactivated ND vaccine ( <b>MANDATORY IN NSW AND VICTORIA</b> but optional in all other states)
10-14 weeks and every 6 to 8 weeks thereafter	Live V4 ( <b>NOT A PERMITTED OPTION IN NSW OR VICTORIA</b> )  (A permitted option in other states)

- a In addition, where a veterinary advisor feels it is appropriate, live V4 may also be used at day-old but not instead of subsequent recommended vaccination with V4.
- b **A gap of 4 -6 weeks between the last V4 and inactivated ND vaccine is the optimal interval. For example, to be able to vaccinate with inactivated ND vaccine at 10 wks of age, V4 should have been given no later than 6 weeks of age.**

**2.0 Serological target for vaccination outcome**

2.1 Titres are defined as adequate if they are:

(i) In Western Australia and Tasmania only (low risk jurisdictions):

**2<sup>3</sup>** at 16- 18 weeks of age with 66% or more of samples at or above 2<sup>3</sup>. Can be achieved using either V4 on its own or using V4 + Inactivated ND vaccine.

(ii) In Queensland and South Australia (medium risk jurisdictions):

The following options are permitted to achieve 2<sup>3</sup> or above for the **duration of the life** of the bird;

- Inactivated ND vaccine is optional. Producers using this option do not require monitoring vaccination outcome by serology.
- Continuous vaccination using V4 every 6-8 weeks is permitted. This option requires monitoring as per 3.2 and revaccination with V4 or inactivated vaccine if mean titres are below 2<sup>3</sup> and 66% of the birds sampled do not have at least a titre of 2<sup>3</sup>.

iii) In NSW and Victoria (high risk jurisdictions):

A mean titre of  $2^3$  from four weeks after the first vaccination with V4 and  $2^5$  by 6 weeks post vaccination with inactivated ND vaccine, with 66% or more of samples at or above  $2^5$  (mandatory in NSW and Victoria but optional in all other states).

### **3.0 Sampling frequency (excluding Western Australia and Tasmania) depends on the vaccination program**

#### 3.1 Live V4 vaccine + Inactivated ND vaccine

Producers using this program in any state are not required to sample their flocks to demonstrate serological NDV HI titres. Records must be kept to demonstrate during any audit that vaccination has taken place.

#### 3.2 Live vaccination every 6-8 weeks (Queensland and South Australia)

3.2.1 A mean titre of  $2^3$  or above with at least 66% of the birds sampled reaching this titre must be demonstrated at least 3 times; at **18, 34, and 52** weeks of age.

3.2.2 If birds are kept for longer than 75 weeks of age an additional sampling is required at 70 weeks of age.

3.3 All serological sampling is to be undertaken under veterinary supervision or a person approved by the CVO of the relevant state or territory in accordance with the approved sampling protocol.

3.4 On each occasion samples from a minimum of 15 birds must be tested to determine mean titres.

**NEWCASTLE DISEASE VACCINATION PROGRAM  
LAYING HENS AND PULLETS (VACCINATED ON LITTER)  
STANDARD OPERATING PROCEDURES**

**(Note: in accordance with the National ND Management Plan 2008-2012,  
vaccination and testing requirements vary between states).**

**1.0 Vaccination program**

Age of birds	Type of vaccine
2–4 weeks <sup>a, b</sup>	Live V4 ( <b>MANDATORY IN ALL STATES</b> )
10-14 weeks <sup>c</sup>	Inactivated ND vaccine ( <b>MANDATORY IN NSW AND VICTORIA</b> but optional in all other states)
12-14 weeks and every 6 to 8 weeks thereafter	Live V4 ( <b>NOT A PERMITTED OPTION IN NSW OR VICTORIA</b> )  (A permitted option in other states)

- a In addition, where a veterinary advisor feels it is appropriate, live V4 may also be used at day-old but not instead of subsequent recommended vaccination with V4.
- b Guidance: In case of multi-age rearing of birds, it is recommended to vaccinate closer to 2 weeks.
- c If there is evidence of HI titres lower than 2<sup>3</sup> prior to administration of inactivated vaccine, additional live V4 should be introduced between 6-8 weeks of age for subsequent flocks.

**2.0 Serological target for vaccination outcome**

2.1 Titres are defined as adequate if they are:

(i) In Western Australia and Tasmania only (low risk jurisdictions):

2<sup>3</sup> at 16- 18 weeks of age with 66% or more of samples at or above 2<sup>3</sup>. Can be achieved using either V4 on its own or using V4 + Inactivated ND vaccine.

(ii) In Queensland and South Australia (medium risk jurisdictions):

The following options are permitted to achieve 2<sup>3</sup> or above for the **duration of the life** of the bird;

- *Inactivated ND vaccine is optional. Producers using this option do not require monitoring vaccination outcome by serology.*
- *Continuous vaccination using V4 every 6-8 weeks is permitted if inactivated ND vaccine is not used. This option requires monitoring as per 3.2 and revaccination with V4 or inactivated ND vaccine if titres are below 2<sup>3</sup> and at least 66% of the birds sampled have not reached this titre.*

iii) In NSW and Victoria (high risk jurisdictions):

$2^3$  from four weeks after the first vaccination with V4 and  $2^5$  by 6 weeks post vaccination with inactivated ND vaccine, with 66% or more of samples at or above  $2^5$  (mandatory in NSW and Victoria but optional in all other states).

### **3.0 Sampling frequency (excluding Western Australia and Tasmania) depends on the vaccination program**

#### 3.1 Live V4 vaccine + Inactivated ND vaccine

Producers using this program are not required to sample their flocks to demonstrate protection. Records must be kept to demonstrate during any audit that vaccination has taken place.

#### 3.2 Live vaccination every 6-8 weeks (Queensland and South Australia):

3.2.1 A mean titre of  $2^3$  or above and 66% of sampled birds reaching this or higher titre must be demonstrated at least 3 times; at 18, 34 and 52 weeks of age.

3.2.2 If birds are kept for longer than 75 weeks of age an additional sampling is required at 70 weeks of age.

#### 3.3 All serological sampling is to be undertaken under veterinary supervision or a person approved by the CVO of the relevant state or territory in accordance with the approved sampling protocol.

#### 3.4 On each occasion samples from a minimum of 15 birds must be tested to determine mean titres.

# NEWCASTLE DISEASE VACCINATION PROGRAM

## MEAT CHICKENS<sup>#</sup>

### STANDARD OPERATING PROCEDURES

**(Note: in accordance with the National ND Management Plan 2008-2012, vaccination and testing requirements vary between states).**

#### 1.0 Vaccination program

**(Mandatory in all states except Western Australia and Tasmania where vaccination is optional).**

Program	Age of birds #	Type of vaccine
Coarse Spray (CS)** Or	Day-old	Live V4
Drinking Water (DW)	7-14 days	Live V4

# includes off sex layers (cockerels) or meat chickens grown for meat and kept longer than 12 weeks. The titres need to stay at  $2^3$  for the duration of their life. This may require repeated vaccination with live vaccine. If chickens are grown for longer than 24 weeks of age, the requirements are as per layers in each jurisdiction.

**\*\* This route is currently not a registered product label claim and therefore requires off- label use permission by a registered veterinarian that is supervising these flocks. An application under category 21 is currently before the APVMA to approve the use of the V4 vaccine by CS.**

#### 2.0 Serological target for vaccination outcome

2.1 Titres are defined as adequate if, by 35 days of age:

- (i) the mean HI titre of the flock is at least  $2^3$ ; and
- (ii) at least 66% of the sample reach a HI titre of  $2^3$  or higher.

#### 3.0 Sampling

- 3.1 All serological sampling is to be undertaken under veterinary supervision or by a person approved by the CVO of the relevant state or territory in accordance with the approved sampling protocol.
- 3.2 On each occasion samples from a minimum of 15 birds must be tested to determine mean titres.
- 3.3 If titres of  $2^3$  by 35 days of age in 90% of sheds are not achieved, report to the sampling results to the jurisdiction and review vaccination program and technique.

**EMERGENCY VACCINATION FOR JURISDICTIONS NOT  
VACCINATING OR NOT FULLY VACCINATING WHEN AN  
OUTBREAK OF ND IS IDENTIFIED OR IS IMMINENT**

Age of birds	Vaccine protocol
> 2 weeks	<p><b>If the birds are older than 14 days</b> at the time vaccination becomes compulsory in an area, vaccinate with live V4 immediately unless the birds have been previously vaccinated or are due for processing within 7 days.</p>
4 ≥ 18 weeks	<p><b>If the birds are older than 4 weeks but not older than 18 weeks</b> at the time that vaccination is required in an area, and they have not previously received both live V4 and inactivated ND vaccine, the following vaccination program will apply:</p> <ul style="list-style-type: none"> <li>(i) Live V4 immediately; and</li> <li>(ii) Inactivated ND vaccine as soon as possible thereafter, but within 4-6 weeks of vaccination with live V4 vaccine</li> </ul>
> 18 weeks	<p><b>If the birds are 18 weeks or older</b> at the time that vaccination is required in an area, and they have not previously received both live V4 and inactivated ND vaccine or are not under continuous vaccination option (with monitoring serological outcome) the following options are available:</p> <p>Option A. Vaccinate with live V4 vaccine, followed by inactivated ND vaccine 4-6 weeks after vaccination with live V4 vaccine.</p> <p><b>OR</b></p> <p>Option B. Undertake serological testing (to the protocol provided), and</p> <ul style="list-style-type: none"> <li>(i) <b>if the mean titre of any flock tested is less than 2<sup>3</sup></b> and less than 66% of the birds tested have reached a titre of 2<sup>3</sup>, that flock must be vaccinated with live V4 vaccine immediately.</li> <li>(ii) if birds are in cages, followed by inactivated vaccine 4-6 weeks after vaccination with live V4 vaccine. If birds on litter- repeat V4 is optional instead of inactivated ND vaccine.</li> <li>(iii) <b>If the mean titre of any flock is greater than or equal to 2<sup>3</sup> but less than 2<sup>5</sup></b>, then the following alternative courses of action will apply: vaccinate flocks on litter with live V4 vaccine immediately, and again thereafter every 8 weeks, or undertake serological monitoring of the flock every 8 weeks thereafter, and revaccinate with live V4 vaccine if the mean titre is less than 2<sup>3</sup>.</li> <li>(iv) <b>For flocks in cages with titres &lt; 2<sup>5</sup> - vaccinate immediately with inactivated ND vaccine</b></li> </ul> <p><b>If the mean NDV HI titre of any flock (litter or cages) is greater than or equal to 2<sup>5</sup>, no revaccination is required.</b></p>