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

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

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):
       \[2^3\] 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;

       - 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 \[2^3\] and 66% of the birds sampled do not have at least a titre of \[2^3\].
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.