

The Safe solution



Nobilis[®] ND C2

The gentle approach to
Newcastle Disease protection.



Nobilis® ND C2

The safe solution

Live ND vaccines may cause vaccination reactions particularly following day old vaccination.

Undesirable vaccination reactions result in decreased efficacy of the respiratory immune system. Birds are then susceptible to secondary bacterial infections.

This results in:

- Reduced growth rates
- Increased mortality
- Increased condemnations

Decreased overall production of the flock.

The Solution: Nobilis ND C2

Nobilis ND C2 contains a novel respiratory Newcastle Disease strain that causes no vaccination reactions.



Nobilis® ND C2

Gentle but effective

Nobilis ND C2: A respiratory vaccine strain against a respiratory disease

Newcastle Disease is a respiratory disease. The virus initially targets and damages the respiratory tract. Systemic protection alone will not prevent damage. A strong local immune response is vital for complete protection of the respiratory tract after infection.¹

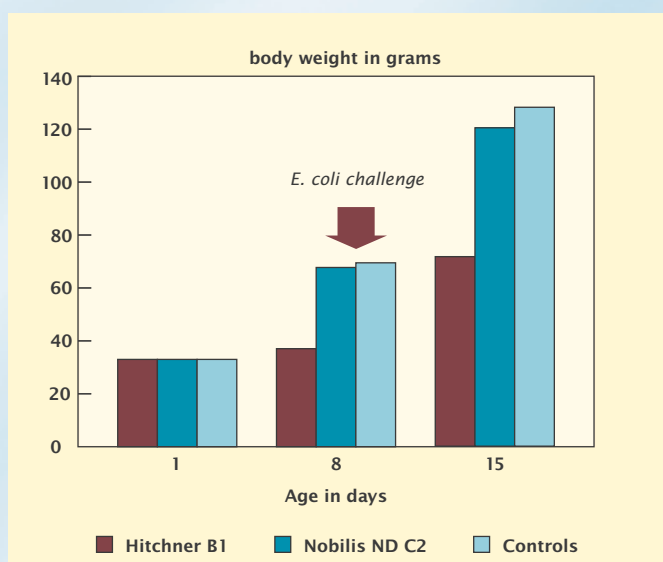
Nobilis ND C2 targets the upper respiratory tract. By using spray vaccination a strong local immune response is induced, even in chickens with maternally derived antibodies (MDA).

Nobilis ND C2 is essentially apathogenic causing no vaccination reactions and reducing secondary bacterial infections

Comparison - Nobilis ND C2 and Hitchner B1 vaccine

Reactions following vaccination cause an increased susceptibility to secondary bacterial infections such as *E. coli*.

To determine the presence and severity of respiratory vaccination reactions, the following trial was done.



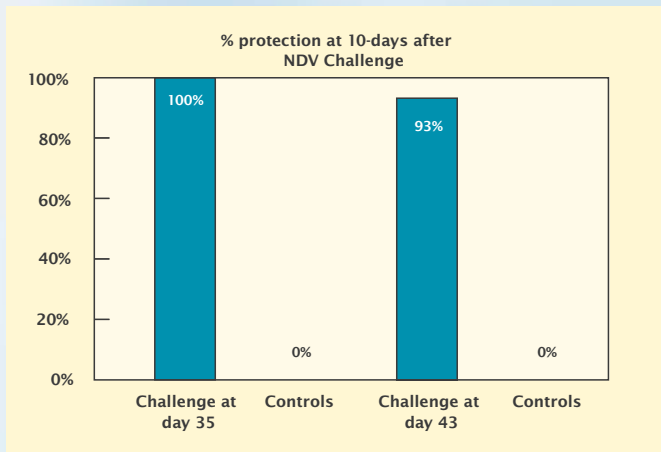
- Three groups of day old chickens were exposed to spray vaccination with Nobilis ND C2, a Hitchner B1 vaccine or diluent (controls)
- All groups were challenged intratracheally with virulent *E. coli* at 8 days of age
- Body weights were recorded at 1, 8 and 15 days of age

Nobilis ND C2 causes no post-vaccinal respiratory reactions, decreasing the incidence and severity of secondary bacterial infections

Nobilis® ND C2

The safe effective primer

Nobilis ND C2 is intended for use as a primary vaccination to be followed by a booster vaccination with Nobilis ND Clone 30 (or Nobilis Ma5 + Clone 30).



Efficacy

- Two flocks of commercial broilers vaccinated in the hatchery with Nobilis ND C2 (spray)
- Both flocks received a Nobilis ND Clone 30 booster on the farm at 14 days (spray)
- Two groups of unvaccinated controls were included in the trial
- One flock of vaccinated chickens and one group of controls were challenged with NDV (Herts strain) at day 35
- One flock of vaccinated chickens and one group of controls were challenged with NDV (Herts strain) at day 43
- Percentage protection was determined 10 days after NDV challenge

Nobilis ND C2 is effective as a primer for Nobilis ND Clone 30 under field conditions

Priming with Nobilis ND C2 reduces respiratory reactions following re-vaccination with more potent ND vaccines such as Nobilis ND Clone 30.

Day 1	Vaccination reaction score (mean)	Day 14	Vaccination reaction score (mean)
ND C2	1,07	ND Clone 30 (spray)	1
ND C2	1,07	ND Clone 30 (aerosol)	1,2
ND C2	1,07	ND Clone 30 (dw)	1

Vaccination reaction score:

1. Normal, no reaction
2. Less active, some respiratory signs
3. Sick
4. Very sick



Safety

- 11 flocks of commercial broilers were included in a field trial
- The flocks were vaccinated at one day of age with Nobilis ND C2 by spray vaccination.
- Between 14 and 17 days of age each flock received a booster vaccination with Nobilis ND Clone 30 by spray, aerosol or drinking water
- Vaccination reactions were scored daily for 14 days following both vaccinations

Priming with Nobilis ND C2 reduces reactions to subsequent booster vaccinations

Nobilis® ND C2

The safe solution

- **Safe, non-pathogenic Newcastle Disease vaccine strain**
- **C2 strain targets the trachea inducing effective local protection of the respiratory tract**
- **Applied by spray vaccination, suitable for use in hatcheries**
- **Used as a primer for Nobilis ND Clone 30 providing a vaccination programme with excellent protection and minimal vaccination reactions**



Nobilis® ND C2

The gentle approach to ND protection



NOBILIS ND C2

Description:

Nobilis ND C2 is a live lyophilized vaccine containing the patented, virtually non-reactive C2 strain of Newcastle Disease virus.

Indication:

Nobilis ND C2 is indicated for the active immunization of chickens to reduce clinical signs and mortality caused by Newcastle Disease virus. Nobilis ND C2 acts as a primer to reduce vaccination reactions of subsequent vaccinations with lentogenic ND vaccines such as Nobilis ND Clone 30.

Vaccination programme:

Nobilis ND C2 should be given at day old followed by Nobilis ND Clone 30 at 14 days of age.

Administration:

Nobilis ND C2 can be given via coarse spray or ocular/nasal application from day old onwards.

Presentation:

Nobilis ND C2 is available in vials of 1000, 2500 and 5000 doses.



References:

- ¹ S.O. Al-Garib, A.L.J. Gielkens, E. Gruijs, G. Koch (2003),
Review of Newcastle disease virus with particular
references to immunity and vaccination,
Worlds Poultry Science Journal, Vol. 59, June 2003

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