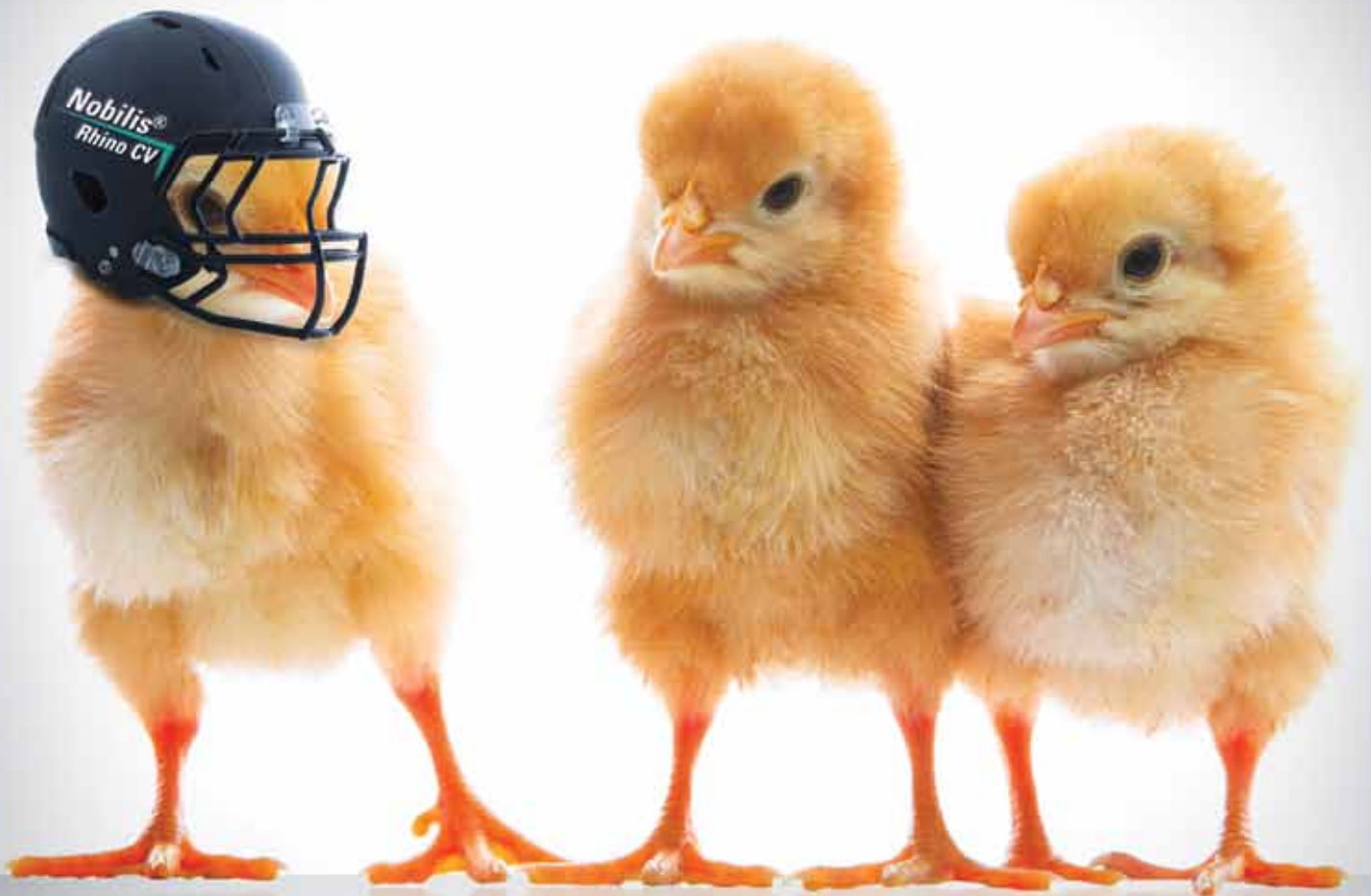


# TOUGH PROTECTION!

**Nobilis® Rhino CV**



Solid immunity against  
Avian Metapneumovirus infections

## Nobilis® Rhino CV

### Avian Metapneumovirus Infection

#### Avian Metapneumovirus Infection

Avian Metapneumovirus (AMPV) infection causes respiratory disease in chickens. Clinical signs of (AMPV) infection are aggravated by concomitant viral or secondary bacterial infections and poor management practices.

#### Layers and Breeders

Avian Metapneumovirus infection is associated with:

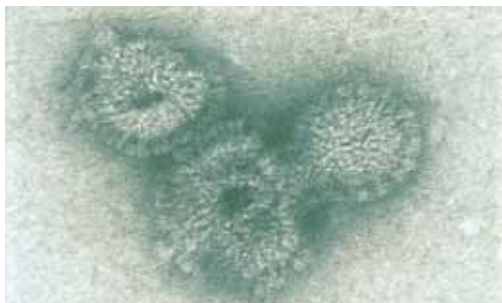
- Decreased egg production
- Decreased hatchability
- Changes in egg shell and internal quality
- Respiratory signs.

#### Broilers

Swollen Head Syndrome (SHS) is associated with Avian Metapneumovirus infections of the respiratory tract combined with secondary bacterial infections such as *E.coli*. Broilers are usually affected after 3 weeks of age.

#### Consequences of SHS are:

- Increased mortality rates
- Increased use of antibiotics
- Poor feed conversion rates
- Increased condemnation rates.



Electron microscope image of AMPV virus



Chicken affected by AMPV infection\*



Purulent exudate under the skin of the head

# Single vaccination, long-lasting immunity.

## Long-term protection against AMPV infection

A single vaccination with Nobilis® Rhino CV provides protection through to at least 16 weeks of age. Thus no booster vaccinations are required.

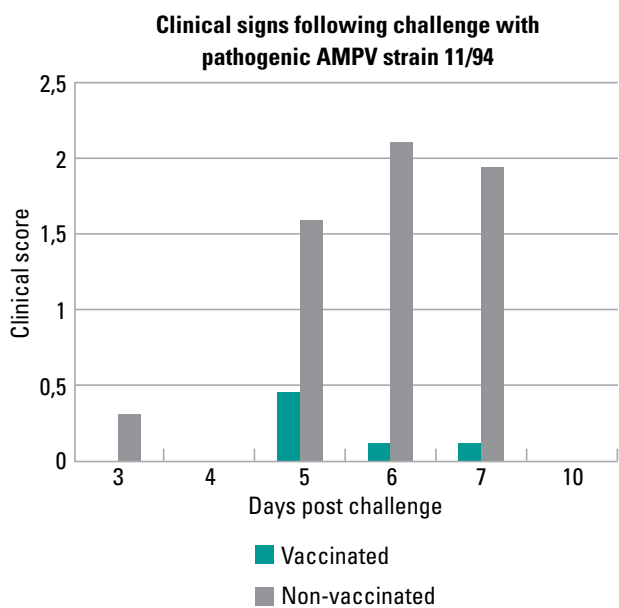
#### Trial

- Day-old MDA\*-positive chickens vaccinated with Nobilis® Rhino CV by coarse spray.
- Non-vaccinated group as controls.
- 16 week post-vaccination challenge with AMPV strain 11/94.
- Clinical signs recorded for 10 days post challenge.

#### Assessment of clinical signs

Score	Clinical signs
0	No clinical signs
1	Slight nasal exudate
2	Moderate nasal exudate
3	Copious nasal exudate
4	Turbid nasal exudate
5	Ocular discharge
6	Swollen sinus

#### Results



#### Conclusion

Nobilis® Rhino CV administered at one day of age in the presence of maternal antibodies provides good protection against AMPV infection for at least 16 weeks.

\*Photograph: Prof. Dr. HM Hafez

\* Maternally Derived Antibodies

# Nobilis<sup>®</sup> Rhino CV and Nobilis<sup>®</sup> RT Inac - Complete protection for breeders and layers.

## Nobilis<sup>®</sup> Rhino CV, an effective primer for Nobilis<sup>®</sup> RT Inac

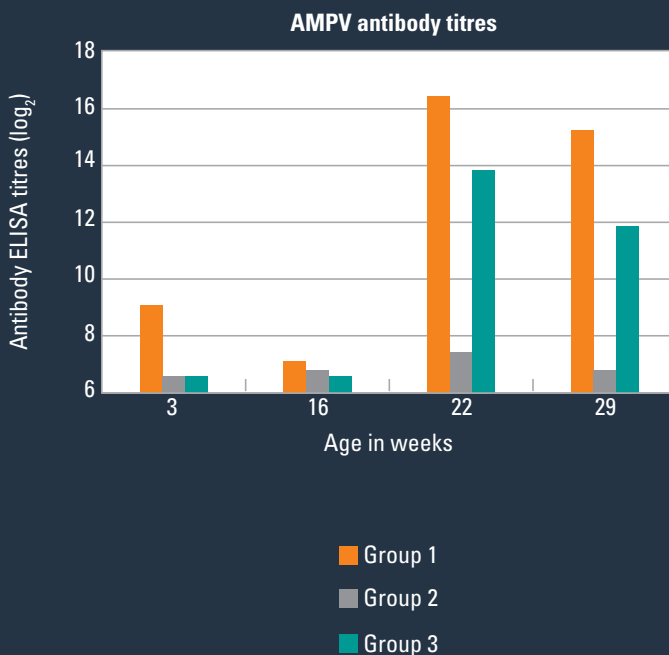
### Trial

- SPF day-old chickens were divided into three groups as follows:

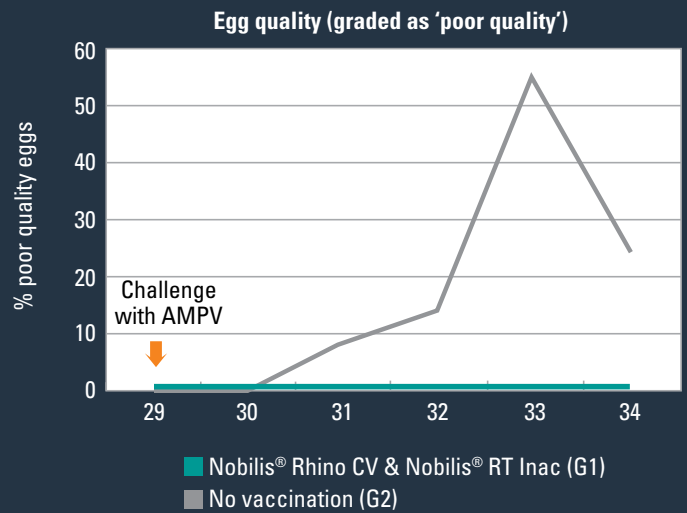
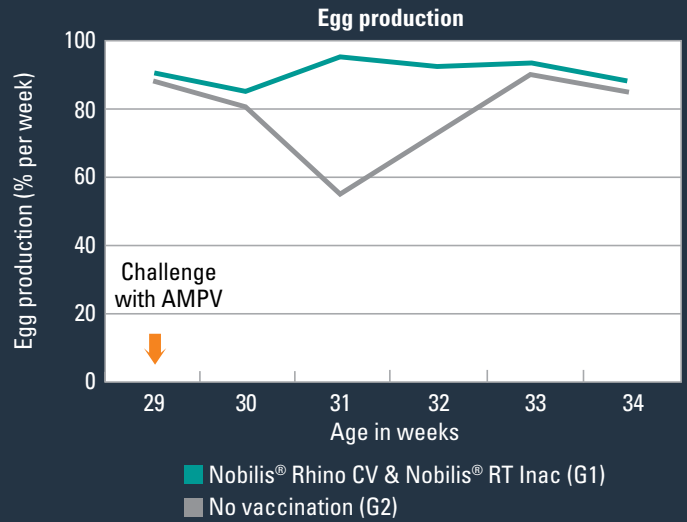
	Nobilis <sup>®</sup> Rhino CV (day old)	Nobilis <sup>®</sup> RT Inac (16 weeks)	Challenge (29 weeks)
Group 1	Yes	Yes	Yes
Group 2	No	No	Yes
Group 3	No	Yes	No

- Birds were challenged at 29 weeks with AMPV 11/94.
- Antibody levels were determined by an in-house ELISA.
- Daily egg production and the percentage of eggs graded as "poor quality" were recorded.

### Results



## Safeguards egg production and egg quality



### Conclusion

Nobilis<sup>®</sup> Rhino CV is an effective primer for subsequent vaccination with Nobilis<sup>®</sup> RT Inac. Higher antibody levels are found than after the use of the inactivated vaccine alone. Furthermore, a vaccination programme with live and inactivated AMPV vaccines protects against the negative effect on egg quality and drop in egg production caused by AMPV infections.

\*Antibody titres 6 are considered to be non-specific

# A homologous chicken AMPV strain. Tough protection for chickens.

## **Protection for layers, breeders and broilers.**

Nobilis® Rhino CV is a homologous live vaccine for protection against AMPV infections in layers, breeders and broilers.

## **Nobilis® Rhino CV**

- A homologous chicken strain of Avian Metapneumovirus (strain AMPV subtype B -11/94) specifically selected for the immunisation of chickens.
- One vaccination at one day of age provides lifelong immunity in broilers.
- Nobilis® Rhino CV as a primer for Nobilis® RT Inac provides protection for a full laying period against AMPV-related drops in egg production and poor egg quality.
- Administration by coarse spray or eye drop from one day of age onwards.



# Solid immunity against Avian Metapneumovirus Infections

## Suggested vaccination schedule

	Age	Vaccine
Broilers	From day 1 onwards	Nobilis® Rhino CV
Breeders/Layers	From 1 - 2 weeks	Nobilis® Rhino CV
	16 - 20 weeks	Nobilis® RT Inac

## Description

Nobilis® Rhino CV is a homologous live freeze-dried vaccine against Avian Metapneumovirus infection in chickens. Each dose contains at least  $10 \log^{1.5} \text{TCID}_{50}$  of live attenuated Avian Metapneumovirus strain 11/94.

## Indication

Nobilis® Rhino CV is indicated for the active immunisation of chickens to reduce the clinical signs and effects of infection with Avian Metapneumovirus.

## Administration

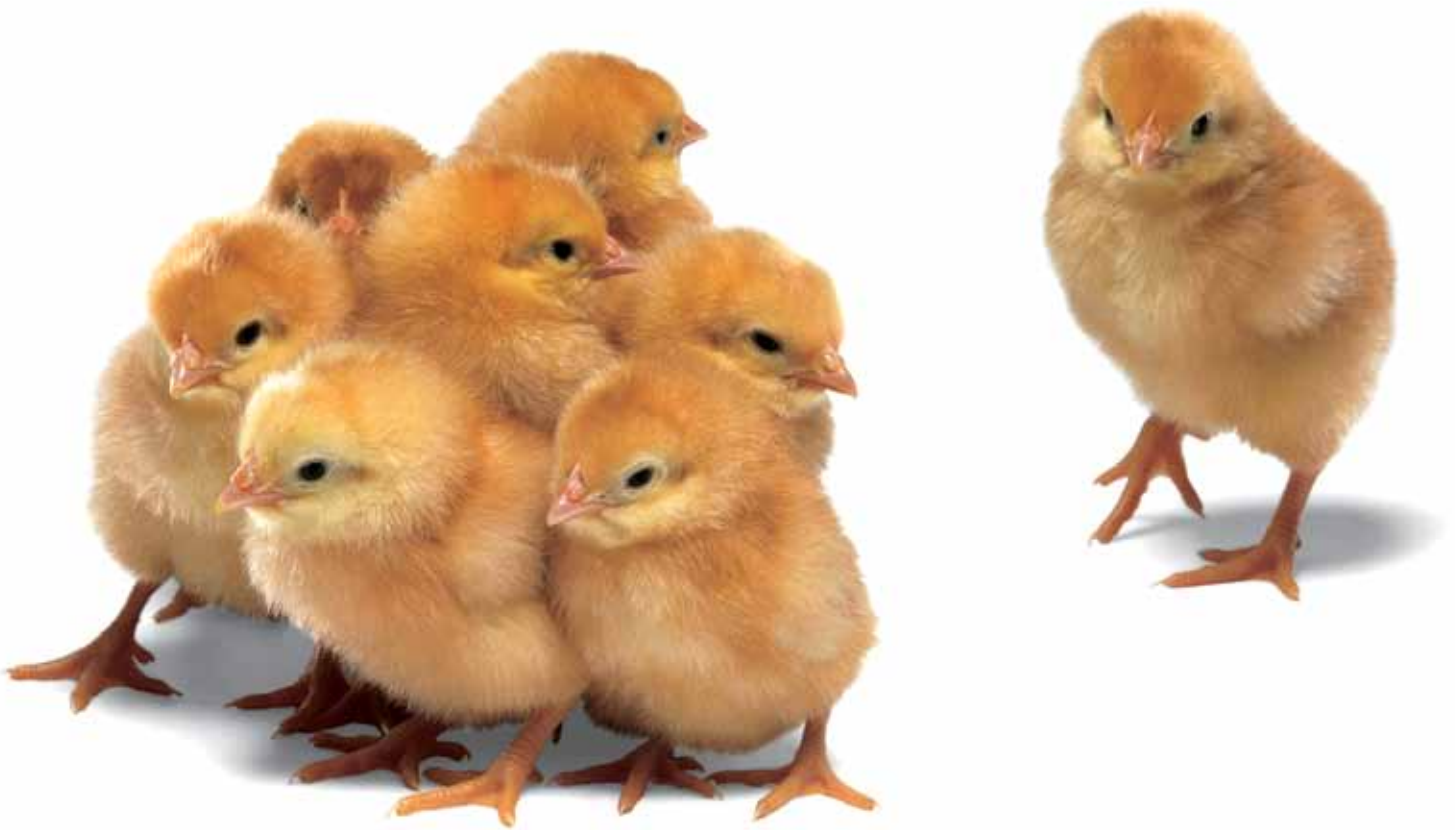
The vaccine can be administered by coarse spray or eye drop.

## Presentation

Nobilis® Rhino CV is available in 1000-, 2500- and 5000-dose.



# One vaccination at one day of age provides lifelong immunity in broilers.



***Nobilis® Rhino CV***

Nobilis® Rhino CV Reg. No. G3278 (Act 36/1947)

Nobilis® RT Inac Reg. No. G2850 (Act 36/1947)

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