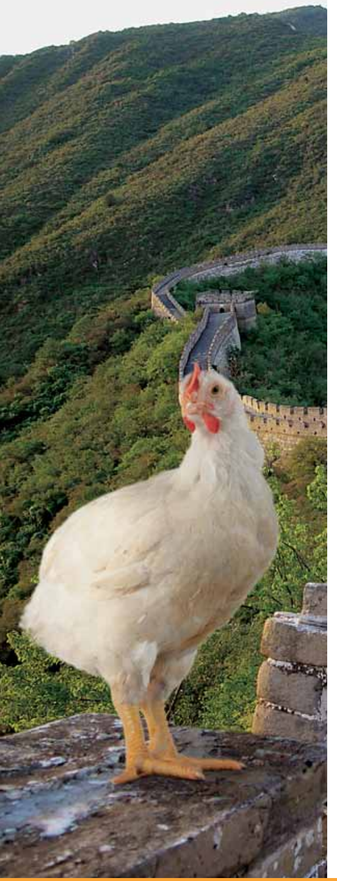


Why Nobilis Gumboro D78 should be your first line of defence

D78 is a plaque purified vaccine...

- Single virus sub-population.
- Predictable vaccine response.
- No reversion to virulence.

D78 causes minimal bursal damage...

- No immunosuppression or secondary infection.
- More uniform flocks for easier management and marketing.
- Improved feed conversion and production efficiency.

Suggested vaccination schedule

Future layers/breeders	Day	Broilers	Day
Parents vaccinated with an inactivated vaccine.	21 - 28*	Parents vaccinated with an inactivated vaccine.	17 - 23*
Parents not vaccinated with an inactivated vaccine.	14 - 24	Parents not vaccinated with an inactivated vaccine.	7 - 14

**When MDA titres are uniform, one vaccination will normally be sufficient.*

Description

Nobilis Gumboro D78 is a live freeze-dried vaccine against Infectious Bursal Disease (IBD) containing at least 4.0 $\log_{10}$ $TCID_{50}$ per bird dose.

Indication

Active immunisation of chickens against Gumboro disease (IBD).

Administration

The vaccine can be administered through the drinking water.

Presentation

Nobilis Gumboro D78 is available in sphereon of 1000, 2500, 5000 and 10,000 doses.

Nobilis® Gumboro D78

Your first line of defence against Gumboro

MSD Animal Health

Visit www.gumboro.com

Gumboro.com is the worlds most comprehensive website, dealing with every aspect of the disease.

Here you will find authoritative information on prevalence and pathogenesis, on examination of the various control options, the latest research findings and trials data, and much more besides.

Nobilis® Gumboro D78

The world's No. 1 name in Gumboro control

Intervet International bv
PO Box 31, 5830 AA Boxmeer
The Netherlands
Phone: +31 (0)485 587600
Fax: +31 (0)485 577333
E-mail: info@merck.com
www.msd-animal-health.com

MSD Animal Health

Gumboro disease: a potent threat

When Gumboro field virus attacks, it causes:

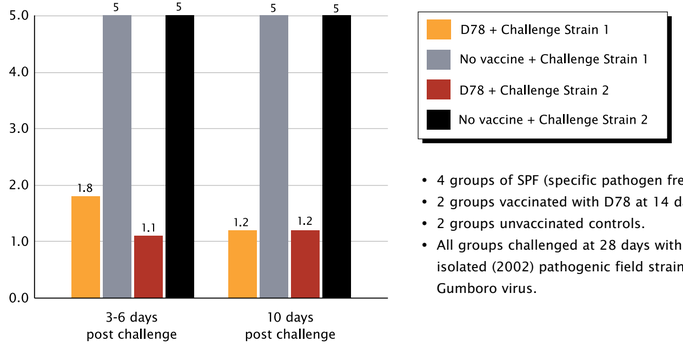
- Bursal damage
- Secondary Infections
- Poor feed conversion
- Mortality
- Immunosuppression
- Uneven flocks
- Lower production efficiency

Nobilis Gumboro D78: an effective defence

Trials with recently isolated (2002) pathogenic strains of IBDV demonstrate that Nobilis Gumboro D78 is outstandingly effective:

- Protects against bursal damage.
- Breaks through higher levels of maternally derived antibodies (MDA) than other widely used intermediate Gumboro vaccines.
- Prevents clinical symptoms of Gumboro Disease.

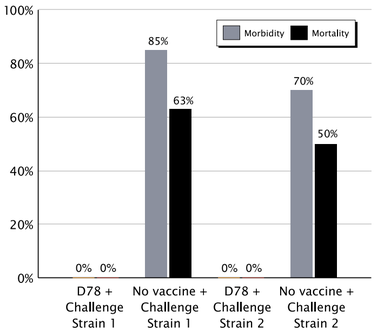
Bursal damage: Lymphocyte depletion score



(Score 5 = 100% Lymphocyte depletion)

- 4 groups of SPF (specific pathogen free) chickens.
- 2 groups vaccinated with D78 at 14 days.
- 2 groups unvaccinated controls.
- All groups challenged at 28 days with recently isolated (2002) pathogenic field strains of Gumboro virus.

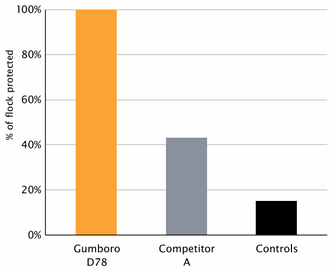
Morbidity and mortality following challenge



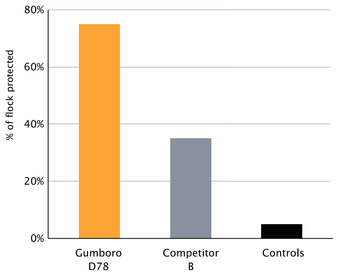
- D78 effectively prevents clinical symptoms of Gumboro Disease.
- Zero morbidity and mortality in the face of viral challenge.

Protection as evaluated by antigen capture ELISA

Trial 1



Trial 2



- Two controlled trials evaluating D78 and two competitor intermediate vaccines in broilers with maternally derived antibodies.
- Average virus neutralisation (VN) titre of the group at time of vaccination was approximately 8 log2.
- Broilers were challenged with a virulent Gumboro virus (ref. strain F52/70).
- Efficacy was evaluated by measuring the concentration of challenge virus in the bursa 3 days post-challenge. (Birds with <1000 ELISA units/gram bursa are considered protected.)